

Before the
Federal Communications Commission
Washington, D.C. 20554

CC Docket No. 92-297

In the Matters of

Rulemaking to Amend Part 1 and Part 21 of the Commission's Rules to Redesignate the 27.5 - 29.5 GHz Frequency Band and to Establish Rules and Policies for Local Multipoint Distribution Service;

RM-7872;
RM-7722

Applications for Waiver of the Commission's Common Carrier Point-to-Point Microwave Radio Service Rules;¹

Suite 12 Group Petition for Pioneer's Preference; PP-22

University of Texas - Pan
American Petition for Reconsideration of Pioneer's Preference Request Denial

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**NOTICE OF PROPOSED RULEMAKING, ORDER,
TENTATIVE DECISION AND ORDER ON
RECONSIDERATION**

Adopted: December 10, 1992; Released: January 8, 1993

Comment Date: March 16, 1993

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By the Commission:

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I. INTRODUCTION

1. This Notice of Proposed Rulemaking and Tentative Decision (NPRM) proposes a redesignation of use of the 28 GHz band from point-to-point microwave common carrier service to a local multipoint distribution service. In separate sections of this document, we address pending waiver applications in the Common Carrier Point-to-Point Microwave Radio Service filed in anticipation of our action on the instant petitions for rulemaking, (Section IV). In addition, we address two petitions for pioneer's preference, one of which is before us on a petition for reconsideration of the staff's action dismissing the request. (Section V).

2. We initiate this NPRM in response to a petition filed by Suite 12 Group ("Suite 12"), a group of inventors who have engineered a millimeter wave component technology which can be used to offer video and other communications services in the 27.5 - 29.5 GHz frequency range ("28 GHz band"). We have received two other petitions for rulemaking which affect the 28 GHz band. In response to Suite 12's petition for rulemaking, Video/Phone Systems, Inc. (Video/Phone) proposes a Local Wireless Broadband Service (LWBS) for the 28 GHz band in a separate rulemaking petition. In addition, Harris Corporation (Farinon Division) (hereinafter "Harris") filed a petition for rulemaking (RM-7722) suggesting that the Commission implement a uniform channelization plan for the 28 GHz band so that equipment manufacturers would have a standard to apply for the development of new technology.

¹ A list of applications identified to date is provided in Appendix C. Should any further waiver applications be identified in the future, we hereby delegate authority to the Common Carrier Bureau to dismiss them in accordance with the holding in this Order.

3. In this proceeding we propose to accommodate the Suite 12 and Video/Phone requests. The 28 GHz band is virtually unused, and the proposals before us, if developed to their apparent potential, will provide consumers with additional options by which to satisfy video and other telecommunications requirements. Among the primary regulatory objectives of this proceeding are providing applicants in this band sufficient flexibility to satisfy consumer demand, expediting service to the public, making more efficient use of essentially fallow spectrum, and streamlining the licensing process while deterring speculative applications. We propose licensing and regulatory policies that, in our experience, should serve these objectives. We seek comment on proposals to license two licensees in each area; adopt minimal technical rules to accommodate multipoint video programming distribution, wideband video, data, and other telecommunications services; require that service be available to 90% of the residents within a service area within 3 years; adopt one-day-filing; use lotteries or auctions to select licensees; and employ minority and diversity of ownership preferences. We also deny 971 pending waiver applications that seek to establish point-to-multipoint video distribution services without benefit of the instant rulemaking to amend the current Common Carrier Point-to-Point Microwave Service rules.

4. Suite 12's and Video/Phone's proposed redesignation of the 28 GHz band is for a service which meets the generic standards of a multipoint distribution service. However, due to the novel technology which uses a cellular distribution format and a greatly expanded range of services which can be offered, we find that this service is separate and distinct from other types of multipoint distribution services. Accordingly, we propose to title the new service Local Multipoint Distribution Service (LMDS) and propose new rules suited to the technology and distribution format to be used.

II. BACKGROUND

5. The 28 GHz band has been available for point-to-point microwave radio common carrier use since 1959. Nevertheless, until 1991, the only licensees for the 28 GHz band were for a few temporary fixed licenses authorized under Part 21. Very little, if any, common carrier point-to-point use of the frequency band has been made since 1959.²

6. In 1991, the Commission authorized a wholly-owned affiliate of Suite 12 to construct a system in the New York Primary Metropolitan Statistical Area (PMSA) using millimeter wave technology to provide video service. *Hye Crest Management, Inc.*, 6 FCC Rcd 332 (1991). The application proposed a new fixed station in the 28 GHz band to provide 24 channel television service in New York City. The licensee, Hye Crest, was granted waivers of Sections 21.108 (directionalization and bandwidth requirements)

and 21.700 (status eligibility). Hye Crest also received a designated service area, the New York PMSA. Hye Crest subsequently requested and received authorization for a major modification of its license to change the transmitter type to offer 49 television channels within 1000 MHz of spectrum. Hye Crest filed its Certification of Completion of Construction for its first facility located at Brighton Beach, New York (FCC Form 494A) on July 1, 1992. Hye Crest's authorization is for a five year period. Since granting Hye Crest's initial authorization, we have received 971 applications accompanied by petitions for waiver of the Commission's rules from entities seeking to provide service similar to that of Hye Crest around the nation. On October 29, 1992, the Common Carrier Bureau released an *Order (In the Matter of Rulemaking to Amend Part 2 and 21 of the Commission's Rules to Redesignate the 27.5 - 29.5 GHz Frequency Band, and to Establish Rules and Policies for Multichannel Local Distribution Service, DA 92-1488)* announcing that applications in the 28 GHz band would no longer be accepted for filing pending the outcome of the instant rulemaking proceeding.

7. As discussed above, three petitions for rulemaking were filed proposing a variety of uses for the 28 GHz band. The Harris and Suite 12 petitions were placed on public notice³ for comment; the Video/Phone petition was a comment to the Suite 12 petition and was not placed separately on public notice.

8. *Suite 12 Petition.* Suite 12 states that the technology it proposes is "capable of immediately providing interactive high quality video, voice, and data services. . . ." It argues that LMDS will help meet the public demand for additional multichannel video programming and for two-way voice and data service. Suite 12 argues that the public will benefit from having an "innovative and competitive two-way interactive communications system" capable of providing the equivalent of fiber cable service without the need to wire a community. Suite 12 states that its system is capable of incorporating future technological advances such as high definition television and digital communications.

9. The system is a multicell configured distribution system with a return path capability. The video channels (20 MHz) are transmitted over 1 GHz of spectrum with the same polarization. Two-way communication channels are inserted between the video channels and are transmitted with opposite polarity. The system uses an omni-directional antenna to transmit from the node, or center of the cell. The subscriber's receiver antenna uses a narrow beamwidth to eliminate multipath reception and to obtain sufficient link margin for service. Each cell is designed to be between 6 to 12 miles in diameter, and shadowed areas are served with a repeater or reflector. The system avoids interference between adjacent cells by cross-polarizing the signals and by taking advantage of the discrimination provided by the

² We have received an application from Motorola Satellite Communications, Inc. to use 100 MHz within the 27.5 - 30 GHz band for gateway/control satellite uplinks in the fixed satellite service (FSS) to support its proposed "Iridium" low earth orbit mobile satellite service. (File Nos. 9-DSS-P-91(87) and CSS-91-010, Public Notice date April 1, 1991, Report No. DS-1068). In addition, the NASA Advanced Communications Technology Satellite (ACTS) is scheduled to be launched in June or July 1993. This satellite will operate from 100% W.L. with 29-30 GHz uplinks and 19.2 - 20.1 GHz downlinks. This program intends to provide several services including T-1 VSAT networks with-

in 100 mile radius of several major metropolitan areas on frequencies 29.242 GHz +/- 20.5 MHz, 29.263 GHz +/- 82.5 MHz and 29.298 GHz +/- 20.5 MHz. See paragraph 22, *infra*.

³ Petition for Rulemaking filed by Harris Corporation (Farinon Division), RM 7722, Public Notice Report No. 1845, released May 15, 1991; Petition for Rulemaking filed by Suite 12 Group, RM 7872, Public Notice Report No. 21049, released December 16, 1991.

subscriber receiving antenna. Suite 12 states that its system makes exceptionally efficient use of the frequency spectrum.

10. *Video/Phone Petition.* Video/Phone is supportive of Suite 12's technology but criticizes it for confining its suggested rules only to video programming service, with secondary communications services. Video/Phone proposes that a Local Wireless Broadband Service would respond to the growing demand for video telecommunications services such as videoconferencing, telecommuting, telemedicine, and education. Video/Phone argues that the lack of economic transmission capability at the local loop has heretofore hindered the growth of these services, which it argues, would have been substantial. Accordingly, Video/Phone proposes rules intended to permit flexible use of the 28 GHz spectrum and Suite 12's technology to provide a wide variety of communication services to the public.

11. *Harris Petition.* Harris proposes that the Commission amend Parts 2, 21, and 94 of the Rules to adopt a channelization plan with multiple bandwidth options for the 28 GHz band and to make the band available for assignment to private carriers under Part 94. Harris argues that manufacturers find it difficult to design and market equipment due to uncertainty regarding channel pairings, bandwidths, channel spacings, etc. Harris also argues that the Commission has adopted frequency sharing between private carriers and common carriers. Furthermore, Harris argues that broad eligibility rules will result in greater and more efficient use of the 28 GHz band. Harris argues that the band could be used to facilitate the implementation of personal communications services through the interconnection of microcells. Finally, Harris argues that private radio use should be permitted for the band because, it contends, the Operational Fixed Microwave Radio Service (OFS) bands below the 28 GHz band are heavily used.

12. Harris opposes Suite 12's proposal, arguing that there is an imminent need for point-to-point spectrum. If redesignation is undertaken, Harris suggests that LMDS assignments be limited to one half of the band and the International Radio Consultative Committee (CCIR) channelization plan be implemented so that multiple uses of the spectrum can be made, including point-to-point services. Harris provides no evidence of either manufacturer or subscriber interest in the 28 GHz band for conventional private or common carrier point-to-point use, however.

13. The Wireless Cable Association (WCA) believes that a redesignation is premature. It argues that wireless cable licensees in the Multichannel Multipoint Distribution Service (MMDS) are at a competitive disadvantage because of their limited channel capacity. WCA also argues that the wireless cable operators are at a competitive disadvantage due to expansion of telephone companies into video dial-tone, and the entrance of franchised cable operators into two-way voice and data services. It contends lack of available spectrum for wireless cable operators has been a brake to their expansion into both video and two-way communications services. Accordingly, WCA is interested in the use of the 28 GHz band for wireless cable operators. Nevertheless, WCA argues that Suite 12 has failed to produce test results into the record that would establish the viability of

its system. Finally, WCA argues that if the 28 GHz band is redesignated for Suite 12's technology, that the public interest may be best served by setting aside spectrum for local wireless cable operators to expand.

III. DISCUSSION

LMDS Demand

14. We believe that the record compiled thus far establishes that 1) the 28 GHz band is not being utilized; 2) Suite 12 and others have demonstrated an interest and ability to use it; 3) the most likely use will be to provide video programming, and that such use will serve the public interest, and 4) we should not limit the use of the band only to video service.

15. Technological advances in the use of radio technology are making possible wider use of spectrum in lower bands and opening use of the higher frequency bands not heretofore possible. One of these advances has been made by Suite 12, which has developed and patented the equipment it hopes to place in subscribers' homes. Suite 12's representations that the proposed redesignation will serve the public interest are supported by its bringing LMDS service to Brighton Beach. In addition, the number of applications received seeking to provide similar service indicates a significant interest in both the technology and the service. Coupled with the volume of public inquiry regarding the service, we find that there is strong public interest in the proposed redesignation.

16. The interest in spectrum for video services, as evidenced by Suite 12's developmental work and the growth of conventional cable subscribership,⁴ supports a tentative conclusion that video programming will be the largest and most commercially significant use of this spectrum at this time. Moreover, such use of the 28 GHz band would provide additional competition to franchised cable companies. A new source of competition for franchised cable companies, wireless cable companies, and other video service providers furthers our goal of using the disciplines of the marketplace to regulate the price, type, quality and quantity of video services available to the public. Accordingly, we propose to redesignate the 28 GHz band fixed service allocation to any video or telecommunications use on either or both the vertical and horizontal polarization planes of the assigned frequency, which the public may require in a particular location.

17. We intend that the rules we promulgate in this proceeding reflect the maximum flexibility for licensees to construct communications systems in which the public is interested. Suite 12's technology offers the promise for a wide variety of applications that could be tailored to local interests. In this sense, it responds to Video/Phone's concerns, because the uses for the 28 GHz band it proposes could be incorporated into service capabilities of the multicell technology if local demand warrants. We therefore seek to establish rules that provide adequate spectrum for multipoint video programming distribution services and to

⁴ In the last decade, the number of households subscribing to conventional cable television service has increased from 21 million in 1982 to 53 million in 1992. 1992 *Television and Cable Fact Book*, Cable and Services Vol. 60, p. G-64.

provide sufficient flexibility to accommodate different types of point-to-point and point-to-multipoint communications services.

18. WCA's concern that licensees in the Multichannel Multipoint Distribution Service will face undesirable competition during its start-up period is unsupported. The existing industry has had a *de facto* head start which moots WCA's concern. We have granted more than 900 applications for wireless cable licenses to date, while potential LMDS licensing awaits this rulemaking proceeding, and video dialtone applications are only now being filed. Thus, MMDS wireless cable systems have had, and will continue to have, a significant opportunity to develop and refine their services and to establish market position.

19. WCA proposed that we set aside a portion of the 28 GHz band for MMDS operators because one of the obstacles facing the MMDS industry is acquiring enough spectrum to provide a service competitive with the franchised cable systems. We do not perceive a compelling public interest justification for setting aside 28 GHz spectrum for MMDS system operators.⁵ We have recently allocated additional spectrum for wireless cable operators. *Second Report and Order*, Gen. Docket No. 90-54, 6 FCC Rcd 6792 (1991). We also have proposed rule changes to expedite processing. *Notice of Proposed Rulemaking* in PR Docket No. 92-80, 7 FCC Rcd 3266 (1992). Accordingly, we do not propose to set aside any portion of the 28 GHz band for MMDS licensees, but we invite comments to address this tentative conclusion, focussing particularly on whether the public interest would be served by a set-aside.⁶

Structure of 28 GHz Band

20. We propose, in accordance with Suite 12's and Video/Phone's suggestion, that the 28 GHz band initially be licensed in two blocks of 1000 megahertz each to two different carriers. Each assignment will be optimized on a cell by cell basis, for video services on the one (horizontal/vertical) polarization, and for other services on the other (vertical/horizontal) polarization. Suite 12's patented technology, the only equipment which appears to be capable of providing direct customer services in the 28 GHz band at this time, uses channels of 20 MHz to provide video service. Since it appears that video service will be, at least initially, the primary service offered in LMDS, we propose to divide each 1000 megahertz band into channels of 20 MHz each; licensees of the respective blocks will then have flexibility to use or lease portions of one or both polarization directions in each cell and to provide a wide variety of services. Thus, each licensee will be able to provide a minimum of 49 video programming channels to the public using the full 1000 megahertz assignment on one polarization direction in each cell. Licensees will also have the opportunity to supplement their video programming with telecommunications services (such as point to multipoint video, data or telephony services) on the full 1000 megahertz assignment by using the opposite polariza-

tion from the video service, and by using frequency offsets and the multicell point-to-multipoint distribution structure. This channelization plan provides licensees the flexibility to offer different telecommunications services in every cell in the designated authorized area to meet the demands of the marketplace for these services. The 27.5 - 28.5 GHz band will be designated the "A-Band," and the 28.5 - 29.5 GHz band will be designated the "B-Band." We seek comment on this assignment scheme.

21. We also seek comment on whether other assignment schemes might better meet our objectives. For example, four blocks of spectrum could be assigned to different licensees instead of two blocks. In this scheme, two larger blocks of spectrum, enough to offer about 34 video channels, could each be assigned to new licensees for LMDS video programming services, and the two smaller blocks of spectrum could each be assigned to other users, possibly to applicants proposing only telecommunications services or a smaller video system. Other assignment schemes may also offer the possibility of providing either additional video programming competition or telecommunications options for subscribers as needs and markets develop in an area.

22. We also seek comment on whether a separate assignment is specifically required to accommodate the proposed satellite service applications in this band or whether adequate coordination and sharing criteria could be developed to permit both terrestrial and fixed satellite services to operate compatibly in the band. None of the commenters discussed existing or proposed satellite use of the band. Normally the Fixed Satellite Service can share with point to point services in an area, as evidenced by the successful sharing of the 4/6 GHz band. However, the multicell multipoint configurations in this proposal envision a wide area distribution of services which may foreclose the possibility of acceptable sharing conditions between satellite and terrestrial services. Proposed satellite use (*see note 1, supra*) is focused in the B-Band (28.5 - 29.5 GHz) segment.

Technical issues

23. The Commission's technical regulations have in the past provided guidance to manufacturers as to the minimum specifications necessary for equipment type acceptance or certification for service. In addition, technical regulations are designed to ensure minimum service performance and facilitate spectrum management, interference control and coordination among individually licensed stations nationwide. Each licensee would have control over its own facilities within its designated service area and would therefore be responsible for minimum service performance and interference levels within its system. The licensee, however, may need to coordinate its operations with other entities licensed to provide service in adjacent designated areas to avoid mutual interference situations. Hence, we must establish regulations to facilitate interference control, spectrum management and coordination at the designated service area interfaces. In addition, coordination require-

⁵ In the Domestic Public Cellular Radio Telecommunications Service (DPCRTS), the Commission set aside one-half the available spectrum for assignment to Local Exchange Carriers (LECs or wireline carriers) upon a finding of compelling public need for a wireline set-aside. *Cellular Lottery Order*, 98 FCC 2d 175 (1984).

⁶ The University of Texas has requested that we consider reserving one-half the available 28 GHz band for educational

use. Accordingly, we also seek comment on the probable relative demand of commercial video entertainment programming and educational or other non-commercial programming on the 28 GHz band and whether the Commission should consider reserving one-half of the spectrum for non-commercial use.

ments and sharing criteria may need to be developed to reflect satellite use. Overall, however, we have an opportunity to be less restrictive in developing technical standards and to promote flexibility for the licensee to meet market demands of the consumer in the designated service area. Although we propose 20 MHz channels for licensing purposes, once licensed, the licensee would not be restricted to specific bandwidth, emission characteristics, etc. and could change the traffic mix within the frequency assignment to meet the requirements of the individual community served by a cell or multiple cells.

24. The three petitions propose a wide range of technical regulations, from a very detailed channelization plan with multiple bandwidth options to a more flexible approach which envisions no restrictions on bandwidth, channelization plan, emission or modulation characteristics. Since the petitions propose to provide licenses for stations over a limited geographical area corresponding to metropolitan statistical areas, they propose some restrictive technical standards and regulations. Given the propagation characteristics of the band, we believe only limited technical regulations may be needed to insure adequate interference control and coordination of services at the interfaces of the designated service areas within each 1000 MHz spectrum block.⁷ We seek comment on the need for technical standards, if any, and specific proposals for power, modulation requirements, channelization, bandwidth, emission characteristics, frequency stability, antenna characteristics, gain, beamwidth, height and polarization and spectrum utilization, as appropriate. We recognize the need to protect stations operating outside the frequency band. The emissions limitations in Part 21 appear to be sufficient to meet this concern. Spectrum utilization would address any questions of spectrum efficiency including minimum standards that should be enforced and how these standards should be determined. Parties should also consider whether technical rules should be adopted to accommodate existing and proposed satellite use of the band.

Regulatory/Licensing Issues

25. *Status of Licensees.* Suite 12 suggested that the Commission authorize video service distributors in the 28 GHz band as non-common carriers, while Video/Phone proposed that parties be allowed to elect either common carrier or non-common carrier status. In *National Association*

of Regulatory Utility Commissioners v. FCC, 525 F.2d 630 (D.C. Cir. 1976), the United States Court of Appeals for the District of Columbia Circuit defined a non-common carrier as one whose practice is to make individualized decisions, in particular cases, whether and on what terms to deal, and who is under no compulsion to offer its services indifferently. A common carrier is one which holds itself out indifferently to serve those who seek to avail themselves of the carrier's particular services, or is under a legal compulsion to do so.

26. We have allowed service providers to elect common carrier or non-common carrier status in a number of radio services licensed by the Commission. For example, we have allowed licensees of satellite transponders to provide service as a non-common carrier entity. We also have allowed Multichannel Multipoint Distribution Service licensees to choose their own status. We have found that doing so furthers the Commission's goals of ensuring that the communications needs of the public are met by allowing marketplace forces to shape the development of service providers. See, e.g., *Wold Communications, Inc. v. FCC*, 735 F.2d 1465 (D.C. Cir. 1984); *Domestic Fixed-Satellite Transponder Sales*, 90 FCC 2d 1238 (1982); *Revision to Part 21, Report and Order*, 2 FCC Rcd 4251, 4253 (1987). As we have done with MMDS, we propose that LMDS licensees choose whether they will operate as a common or non-common carrier on a channel-by-channel and/or cell-by-cell basis. We request comments on this issue, with particular emphasis on the effects status election would have on consumers.⁸ We also invite comment on the basis on which the selection should be made. In addition, we seek comment on whether the non-video services provided by LMDS licensees should be regulated as common carrier services,⁹ and on the jurisdictional implications of allowing election by a local exchange carrier of non-common carrier status in the proposed service.¹⁰

27. *Regulation of Common Carriers.* We tentatively propose that LMDS operators electing common-carrier status for part or all of their systems should be classified as "non-dominant" carriers, and subject to streamlined tariff regulation as with MMDS.¹¹ A non-dominant carrier is one which has insufficient market power to practice anti-competitive pricing. *Id.* Although we propose to reallocate a large quantity of spectrum to LMDS, and to assign each operator one gigahertz of spectrum, we tentatively conclude

⁷ Coordination is required within the border areas with Canada and Mexico. We believe that in these circumstances regulations would be required to coordinate with our neighbors individual stations within 56 km of the border to insure interference protection to and from stations across the border.

⁸ With regard to notification of status election, parties should note the process currently used by MMDS licensees (47 C.F.R. § 21.900, ff.). We request interested parties to comment on the usefulness of these procedures for LMDS licensees.

⁹ See In the Matter of Amendment of the Commission's Rules to Establish New Personal Communications Services, Notice of Proposed Rulemaking (Gen. Docket No. 90-314, ET Docket No. 92-100) 7 FCC Rcd. 5676 (1992). We also seek comment on the application of our video dial tone policies to common carriers providing video services over LMDS.

¹⁰ To the extent that LMDS could be used as a resold telephone service, the Commission has determined that, under Section 332 of the Communications Act, a private land mobile radio licensee may not resell interconnected telephone service for profit. Amendment of Part 90 of the Commission's Rules to Prescribe Policies and Regulations to Govern the Interconnec-

tion of Private Land Mobile Radio Systems, 93 FCC 2d 1111, 1115 (1983), *on recon.*, 49 Fed. Reg. 26066 (1984), *aff'd by judgement sub nom.* Telocator v. FCC, 764 F.2d 926 (D.C. Cir. 1985) (Table); In the Matter of Amendment of the Commission's Rules to Establish New Personal Communications Services, - FCC Rcd - (1992), Gen. Docket No. 90-314, (Notice of Proposed Rulemaking and Tentative Decision) paras. 97-98, note 64. Accordingly, we ask for comment on this issue, in particular, whether LMDS could be classified as a resold telephone exchange service, whether LMDS licensees may operate as private land mobile radio licensees, and what implications operation of such resold telephone service by local exchange carriers (or others) operating as LMDS licensees would have.

¹¹ History and prior citations noted in Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities (Sixth Report and Order), 99 FCC2d 1020 (1985), *rev'd and remanded sub. nom.* MCI Telecommunications Corporation v. FCC, 765 F.2d 1186 (D.C. Cir. 1985); *vacated in part*, AT&T v. FCC, No. 92-1053 (D.C. Cir., November 13, 1992). Commenters should discuss the implications of our competitive carrier policies for participation in LMDS by telephone companies.

that both video and telecommunications services are so well represented in the marketplace that no LMDS operator will have a monopoly or near-monopoly position. For example, in the video distribution market, LMDS faces competition from MMDS, cable television, low-power television, domestic fixed satellites and broadcast television stations. *Revisions to Part 21, supra*. The telecommunications market includes long-distance telephone service, local exchange service, fixed cellular services, fixed satellite communications, private carriers, and Personal Communications Systems (PCS). Accordingly, it appears that LMDS, while it may find a market niche in particular areas, is unlikely to develop into a monopoly service. Should it do so, we could reassess its regulation.

28. *Preemption*. For LMDS licensees choosing non-common carrier status, "[p]reemption is primarily a function of the extent of the conflict between federal and state and local regulation." *In the Matter of Federal Preemption of State and Local Regulations Pertaining to Amateur Radio Facilities*, 101 FCC2d 952, 959 (1985). To the extent such systems provide video entertainment programming, we tentatively conclude that state entry and rate regulation should be preempted. Beyond that, at this stage, the record in this proceeding does not contain any information regarding the extent to which state and local regulations might conflict with provision of LMDS. State law which conflicts with the federal provisions must be preempted, *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132 (1963); however, we require a factual record on this subject prior to making any final preemption determination. Based on the rules proposed herein, and any additional rules, especially of a technical nature suggested by commenting parties, we request comment on the extent to which the Commission may be required to preempt state entry and/or rate regulation of LMDS licensees choosing non-common carrier status.

29. For LMDS licensees choosing to maintain common carrier status, this Commission can preempt state regulation of video service since it is inherently interstate in nature. *United States v. Southwestern Cable Co.*, 392 U.S. 157, 168-169 (1968); *New York State Commission on Cable Television v. F.C.C.*, 669 F.2d 58, 65 (2d Cir. 1982). However, for LMDS licensees providing common carrier telecommunications services, we have jurisdiction only over interstate portions of those services, unless the intrastate services are not severable from the interstate services, and the state regulations thwart or impede federal law and policies. *See, e.g., Louisiana PSC v. FCC*, 476 U.S. 355, 375 n.4 (1986); *National Association of Regulatory Utility Commissioners v. FCC*, 880 F.2d 422 (D.C. Cir. 1989); *Computer III Remand Proceedings*, 6 FCC Rcd 7571, 7625-7637 (1991); *Mobile Telecommunications Technologies Corporation*, 7 FCC Rcd 4061 (1992). Accordingly, for LMDS telecommunications services, the first question we must consider in this proceeding is whether LMDS telecommunications services can be severed into intrastate and interstate components. If they cannot be severed, the Commission must show on a factual basis that potential state regulation would thwart or impede the Commission's interstate regulatory objectives for LMDS. Having incomplete technological information on the manner in which LMDS systems will operate, we are not in a position to determine at this time whether it is appropriate to preempt state entry and/or rate regulation of common carrier LMDS. Moreover, we do not have evidence that any particular state regulatory policies regarding inseverable intrastate LMDS

services would thwart or impede our efforts in establishing this new service. We request that parties, especially Suite 12 as the system inventor, and Video/Phone as the proponent of using the 28 GHz band for telecommunications services, provide information regarding the structure of system operations in light of our need to determine the interstate/intrastate nature of potential telecommunications services, and on whether any preemption of state regulation of intrastate common carrier non-video services is necessary.

30. *Service Areas*. We propose to license LMDS by the 487 "Basic Trading Areas" (BTAs) identified in the Rand McNally 1992 *Commercial Atlas and Marketing Guide*, 123d edition, pp. 36-39 plus Alaska and Puerto Rico, for a total of 489 regional licenses encompassing all land areas within the United States. In *Personal Communications Services - FCC Rcd - (1992)*, Gen. Docket No. 90-314, paragraphs 56 - 61 (Notice of Proposed Rulemaking and Tentative Decision) (PCS NPRM) we discussed the relative benefits and drawbacks of smaller and larger service areas in connection with Personal Communications Services (PCS). Although PCS and LMDS are not necessarily similar services, a number of the considerations discussed in the PCS NPRM regarding BTAs as one of several options posed for that service may apply to LMDS as well. In particular, we are interested in facilitating natural market area licenses in order to achieve three goals. First, the Basic Trading Areas comprise areas within which consumers have a community of interest. Their use for licensing purposes reinforces this identity; a different scheme may not. Second, we wish to maximize the competitive strength of LMDS stations in order to provide as much competition in video distribution and telecommunications services as possible. We noted in *Personal Communications Services* that the cellular industry might have benefitted from larger initial licensing areas, since many licensees have expended large sums to combine metropolitan area and rural area licenses in consolidated systems. On the other hand, the costs associated with marketing and providing a new collection of LMDS services to the public may be prohibitive in larger population or geographic areas. We seek to find an appropriately-sized service area for LMDS in order to take advantage of economies of scale necessary to support a successful enterprise. Finally, we hope to facilitate applications processing. BTAs provide an easily identifiable and manageable number of discrete filing areas covering all areas of the country. Parties may also consider as alternatives to BTAs the 47 "Major Trading Areas" identified in the Rand McNally guide, *supra*, or smaller, cellular-type metropolitan and rural service areas, or Areas of Dominant Influence (ADI).

31. We request comment on the alternative proposals. Commenters should focus on the economies likely to be encountered with LMDS, both video and telecommunications services; the comparative costs of building LMDS systems in smaller and larger service areas; which type of licensing would be most likely to best serve expeditiously the needs of rural areas; and which approach would enhance speed of service to the public. Parties are invited to comment on the competitive implications of each alternative.

32. *Service of minimum areas and/or populations*. In order to ensure that licensees fulfill their responsibility to use the radio spectrum efficiently and provide the best possible service to the public, we propose that within three years of being granted a license, licensees shall be capable of pro-

viding LMDS service to at least 90% of the population residing within the service area. We request comments on this proposal and welcome alternative suggestions.

33. *Cross-Ownership.* We do not propose to adopt cross-ownership restrictions unique to 28 GHz service. The Commission has imposed such rules in a variety of radio services (e.g., cable television cross ownership limitation in the Multichannel Multipoint Distribution Service) to limit the ability of firms having market power from exploiting that position to engage in activity that restricts output, results in uneconomic pricing, or otherwise would deprive consumers of the full benefits of new entry. The evidence before us suggests¹² that the most likely first use of the 28 GHz band will be video entertainment programming, given Suite 12's experience and developmental activities. There is no assurance this will be the case, or that even if it is the predominant use, that it will be the most viable use in all geographic areas. In view of this uncertainty, we are inclined not to exclude any existing video distribution or telecommunications firm from constructing and operating 28 GHz facilities. We seek comment on our tentative policy conclusion that cross-ownership restrictions should not be imposed.

34. On the other hand, the recently-adopted Cable TV Consumer Protection and Competition Act of 1992, P.L. 102-385, Section 11, generally prohibits cable operators from holding a license for "multichannel multipoint distribution service" in their own franchise areas. Although LMDS is not the Multichannel Multipoint Distribution Service, the two services have many similarities, including the method of product distribution. Accordingly, it appears that the intent of Congress to facilitate competition in the video distribution services would include a ban on cable ownership of LMDS licenses if used to distribute video programming.¹³ We solicit parties' comments on the interpretation of the cross-ownership prohibition on MMDS in the Cable Act as it applies to LMDS, and our tentative policy conclusion not to impose cross-ownership restrictions.¹³

35. *Selection from among mutually exclusive applicants.* The two traditional choices available for choosing from among mutually exclusive applicants are comparative hearing and random selection. A third option, competitive bidding, may be available if Congress enacts enabling legislation. Comparative hearings may be either full administrative hearings or expedited hearings conducted primarily through a written record. Full administrative hearings are extremely costly and time-consuming. Expedited "paper" hearings, while not as costly in time and resources as full administrative hearings, are nevertheless cumbersome. For example, proceedings to license the top-30 cellular markets through expedited hearing procedures took approximately two years.

36. Because of our interest in making as many innovative, competitive services available to the public as quickly as possible, we propose to use random selection, or com-

petitive bidding, if authority is provided by Congress, to choose among any mutually exclusive LMDS applications. We request comments on which method would be best suited to this service. We also ask for comment on the specific form any lotteries should take. In our recent Notice of Proposed Rulemaking for the PCS service, we discussed ways in which the lottery system could be improved. We also asked questions on how to implement competitive bidding. *PCS NPRM, supra*, paras. 84 - 91. We ask for comment on these options in the context of this service.

37. *Preferences.* The Communications Act requires the Commission to ensure that any system of random selection "used for granting licenses or construction permits for any media of mass communications" gives significant preferences to applicants who own few other such licenses or who are members of a minority. 47 U.S.C. § 309(i)(3)(A). The Communications Act defines "media of mass communication" to include multipoint distribution service, "and other services, the licensed facilities of which may be substantially devoted toward providing programming or other information services within the editorial control of the licensee." 47 U.S.C. § 309(i)(3)(C)(i). Accordingly, since LMDS appears to be a medium of mass communications, we tentatively conclude that preferences for diversity and minority interests are appropriate for LMDS. We request comment on this issue.

38. *Settlements.* Settlement between mutually exclusive applicants may avoid the need for comparative hearing or random selection procedures and reduce administrative burdens, delay and expense. *See, e.g., Second Report and Order*, Gen. Docket No. 80-112, 50 Fed. Reg. 5983-01, para. 41 (February 13, 1985) (*MMDS Lottery Order*). However, our experience with cellular and MMDS licensing has shown that this purpose has not always been served by permitting settlements. To the contrary, the opportunity to settle is often perceived as making an application a "sure thing" in a game of chance, thus drawing thousands of insincere applicants hoping to profit from merely filing. Accordingly, the settlement rules have not promoted the public interest in licensing entities prepared to serve the public with needed communications services.¹⁴ Thus, we propose to forbid any settlements among applicants for LMDS, and any alienation of interest in an application for LMDS. The rule we propose herein is based on the Part 22 Domestic Public Cellular Radio Telecommunications Service rule barring any alienation of interest in an application, and requires that each applicant file an independent, individual application. We welcome comment on our proposal.

39. *License Term and Transfer of Control/Assignment.* To further ensure that only sincere applicants interested in constructing and operating LMDS systems apply, we propose that licensees be barred from transferring an LMDS license until the system has been constructed, and in fact is serving the public.

¹² We also request parties' comments on the question of whether local exchange carriers operating as wireless cable companies on LMDS would have anti-competitive implications and if so, what regulatory responses would be appropriate.

¹³ To the extent that LMDS operators will provide video services, LMDS may be a "multichannel video programming distributor" under the Cable Act, Section 2(c)(12). If so, LMDS operators would have to comply with certain regulations that

the FCC may adopt consistent with that Act. Interested parties may want to participate in those Cable Act proceedings. In particular, parties should review the Notices of Proposed Rulemaking in MM Dockets 29-259 and 92-264.

¹⁴ Settlement rule changes have been proposed to reflect this new policy in *Revision of Part 22 of the Commission's rules governing the Public Mobile Services*, 7 FCC Rcd 3658, 3665 (1992).

40. Finally, because this is a new and unproven service, we propose a five-year license term. Renewal applications will permit the Commission to monitor the evolution of the service. We propose to adopt renewal expectancy rules and request comment on the details of such rules. We request comments on this proposal, and on whether a license term of ten years would be more appropriate for this service.

41. Our proposals herein are similar to the rules adopted in *Interactive Video and Data Services*, 7 FCC Rcd 1630 (1992) (IVDS), *recon pending*. Our objective is to avoid having numerous applications filed by entities having no intention to provide service, but who only hope to profit from the transfer of an authorization. These insincere applications impose tremendous burdens on the Commission in terms of absorbing applications processing staff resources associated with extension of time requests and other filings designed to retain the license while the licensee tries to market the authorization. We ask commenters to consider our objective of limiting applicants to those ready, willing and able to provide service to the public.

42. *Application requirements.* We propose to adopt rules for application requirements similar to those used for cellular applications. Although these requirements demand vigilance and careful preparation on the part of applicants, the public interest is served because fewer processing delays contribute to licenses being made available as quickly as possible.

43. We propose that the standard to be met for LMDS applications be the "letter perfect" standard, rather than the present Part 21 standard of substantial compliance and opportunity to amend. The latter standard has proved to be administratively burdensome and may have contributed to delays in licensing MMDS stations. Accordingly, LMDS applicants not meeting the proposed rule's requirements would be dismissed rather than, under the current Part 21 practice, being allowed to perfect their applications. We propose that detailed review occur after a lottery is held. Parties are invited to comment on this proposal, with particular emphasis on expeditious licensing of qualified applicants.

44. As an alternative, we request comment on whether a "post-card" application, requiring minimal information about the applicant, would be appropriate for LMDS. No technical or financial information would be required to enter the random selection procedure; however, the applicant would be required to certify that it complies with all eligibility rules. Applicants chosen as tentative selectee would have 30 days to file a complete, letter-perfect application for the Commission's consideration.

45. *One-to-a-Market.* As with cellular licensing, we propose that only one application per market area could be filed by each applicant. We propose that no interest, direct or indirect, would be permitted in another application for the same market, including pre-existing settlement agreements or understandings, which in any event we propose to prohibit. Interests in *bona fide* publicly-held corporations of less than one percent would not be cognizable interests for the purpose of this proposed rule. Parties are invited to comment.

46. *Financial showing.* Due to the large amount of bandwidth which each licensee would receive, and the responsibility each licensee would have to serve a large area, we believe that applicants should give an indication of their financial qualifications to construct and operate their

proposed system. We propose to require applicants to meet the "firm financial commitment" standard which has been required of cellular applicants below the top 120 markets.

47. We propose that applicants be required to provide a proposal of service for 90% of the population within the service area within 3 years, a detailed business plan for meeting their plan of system construction and operation, and a showing of a firm financial commitment to construct the three year plan and to operate for one year after complete construction without additional revenue. Parties are invited to comment on this proposal.

48. *Construction Requirement.* To ensure that the public is served expeditiously, we propose to establish construction completion benchmarks. We propose to require that licenses be conditioned on constructing the system within three years of the date of license grant. Whenever any portion of the system is ready to begin operation, the conditional licensee must file a Form 494A, Notification of Completion of Construction. Thereafter, the licensee need not file any additional notifications until the entire system is constructed. At that point, a letter notification must be filed on or before the third anniversary of license grant. We do not propose to grant extensions of this requirement. We invite comment and further suggestions.

49. *Filing Date.* We propose to establish a one-calendar-day filing opportunity for initial LMDS applications. We intend to announce a single date on which applications for each market area can be filed. This procedure would allow processing to go forward smoothly, with the Commission having foreknowledge of the amount of resources required to handle a known number of applications after the filing is completed. In addition, avoidance of the 60-day cut-off rule used for some other Part 21 applications will reduce the risk of "cookie-cutter" applications, i.e., mere copies of earlier filings, by insincere applicants. In addition, processing should be expedited due to the shortness of the filing period -- the public would not have to wait any additional time for the cut-off deadlines to pass. We do not propose to reopen the filing period until all first round applications are processed. Parties are invited to comment.

50. *Fees.* Section 8(a) of the Communications Act sets forth fees the Commission may assess and collect for filing applications to aid in recovering some of its administrative costs. Because this service is a type of multipoint distribution service, the Multipoint Distribution Service (MDS) fee structure applies. In MDS, a licensee pays an initial fee of \$155 per station for a conditional license and \$455 per radio channel per station when certifying that construction has been completed. LMDS, as proposed herein, will accommodate 50 channels using Suite 12's technology. Thus, each LMDS applicant would pay \$155 per station in its single application for the blanket license for fifty channels in either the A-Band or the B-Band. In addition, upon completion of construction of one or more initial cells, a fee of \$455 for each of the fifty 20 MHz channels, or \$22,750, would be payable. No further fee would be due for constructing the remainder of the proposed LMDS system.

IV. PENDING APPLICATIONS

51. We are also hereby denying the 971 waiver applications pending before us. All are based on existing point-to-point rules which are not structured to address the large amount of spectrum being allocated to individual licensees, nor the service area concept proposed herein, nor the

technical parameters, yet to be developed, of the new service. Instead, they seek waivers similar to those granted in *Hye Crest Management, Inc.*, para. 6, *supra*.

52. In *Hye Crest Management*, the Commission found that a formal rulemaking proceeding permanently reallocating the 28 GHz band for point-to-multipoint services would be premature. The Commission stated that grant of the waiver would not lead to a *de facto* reallocation of the band, and, based on similar waivers in the past, that it did not anticipate "an onslaught of waiver requests." *Id.* at 334. Applying the waiver standard established in *Big Bend Telephone*, 2 FCC Rcd 2413 (1986), the Commission found the waiver standard had been satisfied because "(3) the proposed use of the frequencies will not be detrimental to their assigned users;" 6 FCC Rcd at 334, para. 20.

53. Granting the several hundred waivers before us would amount to a *de facto* reallocation of the 28 GHz band, would be inconsistent with the Commission's suggestion that it would not grant a flood of such requests, and would be detrimental to the assigned users (potential common carrier point-to-point applicants) because spectrum awarded to waiver applicants would not be available to those assigned users. Large scale waivers also would run afoul of the guidance provided by the courts to the Commission in considering waivers, e.g., that they not undermine the purpose of the rule being waived. *WAIT Radio*, 418 F.2d 1153 (D.C. Cir. 1969). We also see no basis for distinguishing among any of the individual requests in an equitable fashion.

V. PIONEER'S PREFERENCE

54. *Background.* The Commission's pioneer's preference rules are a means of recognizing, in the Commission's licensing process, parties that develop new communications services or technologies. The underlying rationale for such rules is to foster the development of new services and improvements to existing services by reducing for innovators the delays and risks associated with the Commission's licensing processes. Innovators of substantial new communications services and technologies have an opportunity to participate either in the new services that they took a lead in developing or in existing services with regard to which they took a lead in promoting application of new technologies.¹⁵

55. For each request before us, we have evaluated (1) whether the requester has demonstrated that its proposal constitutes a significant communications innovation; (2) whether it has made a significant contribution "in developing that innovation; and (3) whether the innovation reasonably will lead to establishment of a service not currently provided or substantially enhance an existing service. In applying these criteria, we employ the pioneer's preference standards set out in our rules and applied in our previous tentative decisions that consider award of pioneer's pref-

erences.¹⁶ We consider whether a proposal is "to provide either a service not currently provided or a substantial enhancement to an existing service"¹⁷ by evaluating factors that include, but are not limited to, (1) added functionality; (2) new use of spectrum; (3) changed operating or technical characteristics; (4) increased spectrum efficiency; (5) increased speed or quality of information transfer; (6) technical feasibility; and (7) reduced cost to the public. In addition, to be eligible for a tentative award, at the time of the tentative decision a requester must have either received an experimental license and reported at least preliminary results, or submitted a written showing that demonstrates the technical feasibility of its proposal.¹⁸

56. Two pioneer's preference requests were filed in this proceeding. The first, filed by Suite 12, was accepted and placed on public notice on December 16, 1991. Comments and reply comments were received in January 1992. The second, filed by the University of Texas - Pan American (UTPA), was submitted on May 1, 1992 and dismissed on June 18, 1992 for failure to include the information required by the pioneer's preference rules and which is necessary for a full and fair analysis of pioneering proposals. UTPA filed a petition for reconsideration on July 20, 1992.

57. *Suite 12 Petition for Pioneer's Preference.* Suite 12 requests a pioneer's preference as the innovator and developer of a new multichannel distribution technology -- the CellularVision system -- that is capable of providing multichannel one-way and two-way video, voice, and data services. Suite 12's companion petition for rulemaking to authorize LMDS in the 28 GHz band is based on its new multichannel distribution technology.

58. According to Suite 12, if authorized, LMDS will be the first wireless telecommunications service to employ millimeter wave transmissions on a point-to-multipoint basis and will offer one-way and two-way voice, video, and data applications within the same band of frequencies. Suite 12 states that the CellularVision system will be spectrum efficient because it will use cross-polarization isolation between adjacent cell transmitter sites -- transmitters at one cell will use vertical polarization and the adjacent cell transmitters will use horizontal polarization. Suite 12 asserts that in this manner the same frequencies will be used to connect adjacent cell sites, for the transmissions to subscribers, and for response channel transmissions from subscribers to cell sites.

59. Suite 12 asserts that it has undertaken detailed experimental programs to test its technology and that these experiments confirm that its equipment is fully functional and can be produced at costs that make LMDS economically feasible on a mass market basis.¹⁹ It says that work on a prototype system began over six years ago and has culminated in the development of low cost, mass quantity production receivers and the building of transmitters.

¹⁵ The pioneer's preference regulations are codified at 47 C.F.R. §§ 1.402, 1.403, and 5.207. See *Establishment of Procedures to Provide a Preference*, Report and Order, 6 FCC Rcd 3488 (1991), *recon. granted in part*, 7 FCC Rcd 1808 (1992), *further recon. pending*.

¹⁶ See, e.g., Amendment of the Commission's Rules to Establish New Personal Communications Services, *supra*, paras. 143-195.

¹⁷ 6 FCC Rcd 3488 at para. 49.

¹⁸ *Allocate Spectrum for Fixed and Mobile Satellite Services for Low-Earth Orbit Satellites*, Tentative Decision, 7 FCC Rcd 1625 at para. 13 (1992); *Establishment of Procedures to Provide a Preference*, Reconsideration Order, *supra*, 7 FCC Rcd 1808 (1992), *further recon. pending*.

¹⁹ These efforts are described in Suite 12's experimental license file, call signs KA2XLG and KA2XVG.

60. WCA opposes Suite 12's request for a pioneer's preference. WCA questions the feasibility of Suite 12's proposal, contending that substantial doubts exist as to the viability of Suite 12's system in the marketplace. In WCA's view, until those doubts are resolved, the Commission would be premature to award Suite 12 a pioneer's preference. WCA also argues that Suite 12 received what is tantamount to a pioneer's preference when the Commission granted Suite 12's wholly-owned affiliate, Hye Crest Management, a license (by waiver) to construct a one-way video transmission system using the 28 GHz band in the New York Primary Metropolitan Statistical Area (PMSA).

61. In replying to WCA's opposition, Suite 12 argues that a report prepared for Suite 12 by the David Sarnoff Laboratories provides a comprehensive technical description of the viability of Suite 12's technology based on tests that the Sarnoff Laboratories performed. According to Suite 12, more than 50 companies and individuals have witnessed demonstrations of Suite 12's LMDS technology, and virtually all have felt sufficiently confident in its technical and market viability to seek licenses from Suite 12 to use it.

62. Suite 12 also maintains that Hye Crest's license is not tantamount to a pioneer's preference grant to Suite 12 because the waiver permits only a one-way video service. Because LMDS technology is capable of two-way voice and data applications in addition to one-way video, Suite 12 argues that it is seeking a pioneer's preference for a different and more sophisticated service than is the subject of the Hye Crest waiver. Suite 12 maintains that regardless of whether LMDS is viewed as a substantial enhancement of the service offered by Hye Crest or as a new service in its own right, it warrants a pioneer's preference.

63. *Decision.* The record demonstrates that Suite 12 is the innovator of LMDS technology and that other companies are seeking licenses to provide LMDS based on Suite 12's pioneering work. No party has challenged Suite 12's claims regarding its developmental efforts. Further, the rules proposed herein are based substantially on Suite 12's proposals in its petition for rule making. While WCA correctly observes that LMDS remains to be tested in the marketplace, the same is necessarily true of most technologies or services for which a pioneer's preference is considered. Therefore, we tentatively conclude that Suite 12 should be awarded a pioneer's preference.

64. Regarding WCA's concerns about Suite 12 already having received the equivalent of a pioneer's preference in the New York PMSA, we disagree with Suite 12 and believe that the service provided by Hye Crest in the New York City area is not substantially different from the service requested by Suite 12 for a pioneer's preference. While Suite 12 is eligible for a pioneer's preference for its proposal in this proceeding, we emphasize that a pioneer's preference for LMDS will not be awarded in more than one service area. Consequently, if a tentative preference to Suite 12 is confirmed, we will modify the authorization to Hye Crest to meet the service area, frequency, and other technical rules developed in this proceeding for the area

encompassing Hye Crest's New York PMSA authorization. Alternatively, if Suite 12 informs the Commission that it prefers a preference in the Los Angeles area,²⁰ and that Hye Crest will surrender its New York PMSA authorization at the time of issuance to Suite 12 of any LMDS license for the service area encompassing Los Angeles, we will grant it a preference for Los Angeles.

65. For the above reasons, we tentatively conclude that Suite 12 should be awarded a pioneer's preference in either the New York or Los Angeles area. If the tentative preference is confirmed and Suite 12 is otherwise qualified, it would be the only eligible applicant for one of the frequency blocks for its preferred service area.

66. *UTPA Petition for Reconsideration.* In its pioneer's preference request UTPA stated that it plans to employ LMDS technology "to ameliorate a critical lack of educational opportunities for the residents of the Rio Grande Valley of Texas."²¹ Specifically, UTPA proposes to employ LMDS in the Rio Grande Valley to provide two-way point-to-multipoint video distribution of various educational material. UTPA's petition was dismissed for failure to describe or otherwise document its role in having developed a specific distinctive innovation or new technology. The dismissal states that proposing a series of applications for a new technology developed by another party, in and of itself, does not meet the requirements for award of a pioneer's preference.²²

67. In its petition for reconsideration, UTPA contends that "innovative applications of technical systems -- applied technology -- are often truly revolutionary and may, in any number of ways, affect quality of life even more significantly than the development of the underlying system."²³ UTPA also maintains that its proposal would extend the potential of LMDS to a more advanced or effective state and thus meet the requirements of the pioneer's preference rules.

68. *Decision.* Our pioneer's preference rules require that an applicant "demonstrate that it (or its predecessor-in-interest) has developed the new service or technology; e.g., that it (or its predecessor-in-interest) has developed the capabilities or possibilities of the technology or service or has brought them to a more advanced or effective state" (emphasis added).²⁴ A pioneer's preference is to reward work already accomplished. Further, the work must be developmental in nature. In contrast to Suite 12, which has performed substantial developmental work and experimental testing of its LMDS technology, UTPA has provided no substantive information about any work that it has performed with regard to LMDS or similar technology. While we concur with UTPA that using Suite 12's technology to serve educational needs in the Rio Grande Valley potentially would confer substantial educational benefits on residents of this area and therefore would be commendable, the purpose of the pioneer's preference rules is not to select licensees for a service, but to reward innovative technical development. If the rules proposed herein are adopted and service is authorized generally, selecting the

²⁰ In its request for pioneer's preference filed on September 24, 1991, Suite 12 specified the San Francisco PMSA as its preferred preference area; however, in an amendment filed on November 19, 1991, Suite 12 changed its request to the Los Angeles PMSA, where it had received an experimental license.

²¹ See Petition for Pioneer's Preference, May 1, 1992, at 2.

²² See letter of June 18, 1992 from Thomas P. Stanley to Steven D. Copold, at 1-2.

²³ See Petition for Reconsideration, July 20, 1992, at 3.

²⁴ 47 C.F.R. § 1.402(a). See *Tentative Decision and Memorandum Opinion and Order*, GEN Docket No. 90-314, released November 6, 1992, paras. 37-49.

licensees to provide such service will be accomplished pursuant to the regular governing selection regulations, and UTPA would be eligible to apply in the normal manner. Accordingly, we treat UTPA's Petition for Reconsideration as a Petition for Review and affirm the dismissal of UTPA's pioneer's preference request.

VI. CONCLUSION

69. We tentatively conclude that the 28 GHz band should be redesignated to accommodate multipoint technology. We propose rules designed to foster the provision of innovative services for the public interest, convenience, and necessity. We invite public comment on the tentative conclusions addressed herein and on the rules set forth in Appendix B.

VII. PROCEDURAL MATTERS

Ex Parte Rules - Non-Restricted Proceeding

70. The NPRM portion of this proceeding is a non-restricted notice and comment rulemaking proceeding. *Ex parte* presentations are permitted, except "during the Sunshine Agenda period, provided they are disclosed as provided in Commission Rules. See generally 47 C.F.R. §§1.1202, 1.1203, and 1.1206(a). Because it has been formally opposed, Suite 12's request for a pioneer's preference is a restricted proceeding, and *ex parte* presentations are prohibited. See 47 C.F.R. §1.1208. Similarly if University of Texas - Pan American's dismissed pioneer's preference request is opposed, it will also become a restricted proceeding. In addition, those waiver requests that are formally opposed or mutually exclusive are also restricted proceedings.

Initial Regulatory Flexibility Analysis

71. *Reason for action.* The purpose of this NPRM is to obtain comment on the change in the fixed service usage for the 28 GHz frequency band.

72. *Objectives.* The objective of this proposal is to consider licensing and service rules for the development and implementation of a new technology to provide video distribution and other telecommunications services to the public.

73. *Legal basis.* The authority for this action is the Administrative Procedure Act, 5 U.S.C. §553; and sections 4(i), 4(j), 301, 303(r) of the Communications Act of 1934 as amended, 47 U.S.C. §§ 145, 301, and 303(r).

74. *Reporting, recordkeeping and other compliance requirements.* Reporting requirements are proposed to ensure that the spectrum, if redesignated for these new uses, is used to serve the public's need for communications services.

75. *Federal rules which overlap, duplicate or conflict with these rules.* None.

76. *Description, potential impact and number of small entities involved.* Any rule changes in this proceeding could affect MMDS licensees, the majority of which are small businesses. These entities may have some additional competition from video programming service which could be provided by Suite 12's multicell technology. After evaluating the comments in this proceeding, the Commission will

further examine the impact of any rule changes on small entities and set forth our findings in the Final Regulatory Flexibility Analysis.

77. *Significant Alternatives.* There are no presently available alternatives to the technology proposed by Suite 12.

Comment Dates

78. Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. §§ 1.415 and 1.419, interested parties may file comments on or before **March 16, 1993**, and reply comments on or before **April 15, 1993**. To file formally in this proceeding, you must file an original and five copies of all comments, reply comments, and supporting comments. If you want each Commissioner to receive a personal copy of your comments, you must file an original plus nine copies. You should send comments and reply comments to Office of the Secretary,* Federal Communications Commission, Washington, D.C. 20554. Comments and reply comments will be available for public inspection during regular business hours in the Dockets Reference Room of the Federal Communications Commission, 1919 M Street, N.W., Washington, D.C. 20554.

79. For further information, contact Ms. Susan Magnotti, at (202) 634-1773, Domestic Facilities Division, Common Carrier Bureau.

ORDERING CLAUSES

80. Accordingly, IT IS ORDERED That the Notice of Proposed Rulemaking is hereby adopted with proposed rules in Appendix B;

81. IT IS FURTHER ORDERED That the petition for reconsideration filed by University of Texas - Pan American IS DENIED;

82. IT IS FURTHER ORDERED That the 971 pending applications in the Point-to-Point Microwave Radio Service involving waiver requests listed in Appendix C ARE DENIED;

83. IT IS FURTHER ORDERED That Suite 12 Group is tentatively granted a pioneer's preference in accordance with the discussion in paragraphs 63-65 of this document;

84. IT IS FURTHER ORDERED That the Secretary shall mail a copy of this document to the Chief Counsel for Advocacy, Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Donna R. Searcy
Secretary

APPENDIX A

Petitioners for Rulemaking

Suite 12 Group
Video/Phone Systems, Inc.
Harris Corporation (Farinon Division)

Commenters to Suite 12 Group's Petition

Video/Phone Systems, Inc.
 Harris Corporation (Farinon Division)
 Wireless Cable Association, Inc.
 Cross Country Wireless Cable I, L.P.
 William B. Packer, Jr. (Packer Investments, Inc.)
 Priscilla Marston
 Dan Reiss, Esquire
 Drake Darrin (Darrin Development Group)
 William T. Lundberg (Alliance Associates)
 Richard C. Woodbridge, Esquire
 Robert G. Shepherd, Esquire
 Charles S. Brand, President, Trontech Incorporated
 Andrew Wahl (Markitstar)
 Tom Brossard
 David Jan Mitchell, Managing Partner, C/V Miami

Commenters to Harris Corporation's Petition

Peninsula Engineering Group, Inc.
 Suite 12 Group
 Digital Microwave Corporation
 TeleSciences, Inc.
 Motorola Microwave
 American Petroleum Institute
 Calling Communications Corporation

APPENDIX B

Proposed Rule Amendments

Part 1 of Chapter I of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

Part 1 - Practice and Procedure.

1. Subpart E -- Complaints, Applications, Tariffs, and Reports Involving Common Carriers is proposed to be amended as follows:

1.821 Scope

Add subparagraph (e):

(e) Local Multipoint Distribution Service.

A new Section 1.826 is proposed to be added as follows:

1.826 Random selection procedures for Local Multipoint Distribution Service.

(a) If there are mutually exclusive applications for an initial conditional license for a Local Multipoint Distribution Service license, the Commission may use the random selection process to select the conditional licensee. Each such random selection shall be conducted under the direction of the Chief of the Common Carrier Bureau. The designated Lottery Official shall select the winning applicant from among mutually exclusive applicants. Only one applicant shall be selected in each frequency block in a given market area. Following the random selection, the Commission shall announce the tentative selectee and determine whether the applicant is qualified to receive the

conditional license. If the Commission determines that the tentative selectee is qualified to receive the conditional license, it shall grant the application. In the event that the tentative selectee's application is denied, another random selection procedure will be conducted.

(b) Competing applications for permits and licenses shall be designated for random selection in accordance with the procedures set forth at Sections 1.1621, 1.1622 (a), (b), (c) and (d), and 1.1623. No preferences pursuant to Sections 1.1622 (b)(2) or (b)(3) shall be granted to any LMDS applicant whose owners, when aggregated, have an ownership interest of more than fifty percent in a media of mass communications whose service areas, as set forth at Section 1.1622(e)(1) through (7), overlaps to any degree or is overlapped to any degree by the market area for which the conditional license is sought.

(c) Petitions to Deny may be filed only against the tentative selectee. These petitions must be filed within 45 days of the Public Notice announcing such tentative selection. A consolidated reply may be filed within 30 days of the due date for Petitions to Deny. Part 21 of Chapter I of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

Part 21 - Domestic Public Fixed Radio Services

1. Subpart I -- Point-to-Point Microwave Radio Service is proposed to be amended as follows:

21.701 Frequencies

Delete from table in subparagraph (a) the reference to 27,500--29,500 MHz and note 5.

21.703 Bandwidth and emission limitations.

Delete from table in subparagraph (a) the reference to 27,500--29,500 MHz.

2. A new Subpart L is proposed to be added as follows:

21.1000 Scope of Subpart

The rules in this subpart govern the licensing and operation of stations and systems in the Local Multipoint Distribution Service (LMDS). The licensing and operation of these stations and systems are also subject to rules elsewhere in this part that apply generally to Domestic Public Fixed Radio Services. However, in case of conflict, the rules in this subpart govern.

21.1001 Eligibility

(a) Local Multipoint Distribution Service authorizations will be issued on either a common carrier or a non-common carrier basis, as requested by the applicant. Applications will be granted only where the applicant establishes:

- (1) it is legally, financially, technically, and otherwise qualified to render the services proposed;
- (2) the public interest, convenience and necessity would be served by such a grant; and
- (3) there are frequencies available to render the full range of services proposed in the application.

(b) Any applicant in the LMDS proposing to provide a medium of mass communication and desiring a preference in the random selection process, shall so indicate as part of its application.

21.1002 Frequencies

(a) Frequencies in the band 27.5 - 29.5 GHz are available for LMDS. Within each service area (see § 21.1007) there are two frequency allocations which the Commission may license: A-Band (27.5 - 28.5 GHz) and B-Band (28.5 - 29.5 GHz). Although the spectrum allocated to each licensee is initially divided into 20 MHz channels, licensees may subdivide their assignments into channels of any bandwidth within either band subject to obtaining coordinations as described in paragraph (b). In the event harmful interference occurs or appears likely to occur between two or more LMDS systems and such interference cannot be resolved between the parties, the Commission may require the licensees to make such changes in operations or techniques or equipment as it may deem necessary to avoid such interference.

(b) *Frequency coordination.* (1) All licensees in the Local Multipoint Distribution Service shall coordinate proposed frequency usage with existing users in service areas within 75 miles of all base stations affected, and with tentative selectees and other non-mutually exclusive pending applicants whose facilities could affect or be affected by the new proposal in terms of intersystem frequency interference or restricted ultimate system capacity, including shared satellite services operating on the 28.5 - 29.5 GHz band. This coordination requirement shall also apply to permissive changes (i.e. changes in frequency assignment not requiring prior Commission approval) within an authorized service area.

(2) All licensees shall cooperate fully and make reasonable efforts to resolve technical problems and conflicts that may inhibit the most effective and efficient use of the radio spectrum; however, the party being coordinated with is not obligated to suggest changes or reengineer a proposal in cases involving conflicts. All licensees shall make every reasonable effort to avoid blocking the growth of other systems that are likely to need additional capacity in the foreseeable future.

(3) Where technical problems are resolved by an agreement or operating arrangement between the parties that would require special procedures to be taken to reduce the likelihood of inter-system interference or would result in a reduction of quality or capacity of either system, the new licensee shall notify the Commission. Upon making a permissive change, a licensee shall notify the Commission of its frequency usage and report on its coordination as required under this subsection.

21.1003 Status election

(a) Applicants and licensees may choose to elect either common carrier or non-common carrier status on a channel-by-channel basis and on an individual cell basis.

(b) Applicants and licensees must notify the Commission of their status elections and must identify the channels and/or individual cells which are operated on a non-common carrier basis. Areas and channels not on record as being in a non-common carrier status will be presumed to be in common carrier status. Licensees must maintain an accurate record of their status elections with the Commission. Changes in status must be reported within 10 days of the effective date of the change.

(c) Applicants shall provide a statement in their applications indicating their choices with regard to status.

(d) Licensees in the LMDS shall follow the procedures set out in §21.910 for change of status election.

21.1004 Content and Form of Applications

(a) Applications for new LMDS systems, and applications for modification of an LMDS conditional license, must comply with the specifications in this section. Failure by an applicant to comply with any requirement of this section will result in the application being dismissed as defective.

(b) *Forms, pages, and exhibits.* Forms, pages and exhibits must be prepared exactly as described and assembled in the order listed in this section.

(1) *Application cover.* The paper original of each application (other than the full-size map) must be enclosed in a stiff cover fastened securely along the left edge. The fastening assembly may not have exposed sharp edges.

(2) *Transmittal sheet.* The first page after the front cover of the application must be the transmittal sheet.

(i) Copies of the transmittal sheet may be obtained by contacting the Consumer Assistance Office, Federal Communications Commission, 1919 M Street, N.W., Washington, D.C. 20554

(ii) On the transmittal sheet, the following information is required: the full name of the applicant, the frequency band, and the service area identification name for which the applicant is applying. This information on the transmittal sheet must match exactly the information on the cover of the application.

(iii) The transmittal sheet also contains a certification. The certification must be notarized and signed with the applicant's full name. Applicants must certify to the following:

"I hereby certify that this application for an authorization in the Local Multipoint Distribution Service is complete in every respect and contains all of the information required by FCC Form 494 and the Federal Communications Commission's rules governing this service.

"I acknowledge that, if the Commission finds this application to be incomplete and/or not in compliance with its Rules, or finds the certification is incorrect, the Commission will dismiss this application without further consideration.

"I certify that I am the real-party-in-interest in this application and there are no agreements or understandings other than those, if any, disclosed in this application, which provide that someone other than the applicant has a direct, indirect, future, or financial interest in the application and/or the requested conditional license. I also certify that the applicant intends to construct and operate the station as proposed and that there are no agreements or understandings inconsistent with this intent.

"I declare, under penalty of perjury, that I am the authorized representative of the above-named applicant in the matter of this application, that I have read and understood the foregoing certification, and that the matter and things therein stated are true and correct."

(iv) The certification must be signed and dated in accordance with the requirements of § 1.743 of this chapter. The certification must be signed in reproducible blue or black ink. Mechanical reproductions of the signature must not be used. The name of and position held by the person signing must be typed or clearly and legibly printed beneath the signature.

(3) *Table of Contents.* A table of contents must be provided. The table of contents must list all of the exhibits to the application.

(4) *FCC Form 494.* All information required for LMDS applications on form 494 must be provided.

(5) *Exhibits.* The following exhibits must be set off by tabs and numbered as follows:

(i) *Exhibit I: Full-size Map.* The scale of the full-size map must be 1:25 0,000. The map must show clearly on its face a legend, a distance scale and correctly labelled latitude and longitude lines. The entire map must be clear and legible. The map must show the entire Geographic Service Area and the boundaries of the Basic Trading Area. The map must be folded into a 8 1/2" x 11" plastic pocket that opens at the top or right side, and the pocket must be bound along the left side with the other pages of the application.

(ii) *Exhibit II: Reduced Map.* This map must be a proportional reduction to 8 1/2 x 11 inches, of the full-size maps required for Exhibit I.

(iii) *Exhibit III: Ownership Information.* Disclose plans for any arrangements for another entity to manage and/or operate the proposed system and provide the written agreements, if any.

(iv) *Exhibit IV: Service Proposal.* Provide information on how the applicant intends to ascertain and provide service to the public.

(v) *Exhibit V: System Design.* Engineering and methodology to construct system to carry out service proposal.

(vi) *Exhibit VI: Public Interest Statement.*

(vii) *Exhibit VII: Environmental Impact Statement.*

(viii) *Exhibit VIII: Business Plan and Start-up Expenses.* This exhibit must disclose in detail the projected cost of construction, and other initial expenses of the proposed system, how the applicant intends to go forward with its service proposal and system construction, and how the applicant intends to meet these expenses and cost of operations for the first year after the entire system is constructed.

(ix) *Exhibit IX: Demonstration of Firm Financial Commitment.*

21.1005 Areas available for licensing

LMDS applications will be accepted for each of the 487 Basic Trading Areas (BTAs) identified in the Rand McNally 1992 *Commercial Atlas and Marketing Guide*, pp. 38 - 39, plus Alaska and Puerto Rico, for a total 489 Basic Trading Areas (BTAs).

21.1006 Application filing period

Applications for an LMDS authorization will not be accepted for any area except upon day(s) specifically identified for acceptance of such applications, as may be announced from time to time by the Commission.

21.1007 Geographic Service Areas

(a) The Geographic Service Area (GSA) of the LMDS system shall be defined by the applicant as the area the applicant intends to serve.

(b) No GSA may extend beyond the boundaries of the Basic Trading Area for which the applicant is applying. Any application which shows a GSA extending past the BTA boundary will be dismissed as defective.

(c) (i) The boundaries of the GSA must include 90% of the population of the BTA.

(c) (ii) The GSA must be drawn on one or more U.S. Geological survey map(s) with a scale of 1:25 0,000. The full-size map and a copy of the map reduced to an 8 1/2" x 11" sheet of paper must be included with the application.

(c) (iii) The applicant must provide the population of the BTA and provide the calculations showing the percentage of the population it proposes to serve.

21.1008 Settlements

(a) Applicants in the LMDS must file independent, individual applications.

(b) Notwithstanding Sections 21.11, 21.23, 21.29, 21.31, 21.38, 21.39, or any other section of this Part, the sale, transfer, assignment or other alienation of any interest in any pending LMDS application is prohibited. This restriction on transfers of interests in LMDS applications includes any form of alienation including option arrangements and agreements, as well as equity and debt placement plans, with the exception of the following:

(i) involuntary transfers if Sections 21.38(d) and (e) are complied with; and

(ii) *pro forma* transfers not involving a change in ownership interest.

21.1009 Mutually-exclusive LMDS applications

Notwithstanding the provisions of subsections 21.31(b)(2)(i) and (ii), to be entitled to be included in a random selection process with one or more conflicting applications, an application for a LMDS authorization must be received by the Commission in a condition acceptable for filing on the calendar day established by the Commission as the day LMDS applications may be filed for the particular BTA for which the application is filed.

21.1010 Interests in LMDS applications

(a) *Interests in applications filed by other than publicly-traded corporations.* Except as otherwise provided herein, no party shall have any interest, direct or indirect, in more than one application for any LMDS authorization.

(b) *Interests in publicly-traded corporate applications.* No applicant for an LMDS authorization may have an interest, direct or indirect, in any LMDS applications filed by publicly-traded corporations, except that ownership interests of less than one percent will not be considered.

21.1011 Demonstration of financial qualifications

(a) Applicants for an LMDS authorization shall demonstrate a firm financial commitment for the financing necessary to construct its entire proposed system over a period of three years and to operate the system for one year without revenue.

(b) Applicants must provide a business plan and the realistic and prudent estimated costs of proposed construction and other initial expenses: estimated operating expenses for a period of one year after completion of all construction; and for applicants not subject to subparagraph (d) of this section, a balance sheet current within 30 days of the date of the filing of the application.

(c) The firm financial commitment shall be from a recognized bank or other financial institution and shall evidence the lender's determination that it has assessed the creditworthiness of the loan applicant and that it is committed to providing the necessary financing. The commitment shall state any actions required of the applicant to continue the commitment in force. Applicants obtaining financing from

other than a recognized lending institution must submit proof that the financing entity has such funds available and uncommitted to another LMDS application.

(d) Applicants relying on internal financing must provide the following information, current within 90 days of the date of the application, in accordance with generally accepted accounting principles:

(i) A balance sheet current within 90 days of the date of the application and copies of any financial commitments (for example, loan agreements and service contracts) in support of the proposed facilities; and

(ii) Whenever internal financing does not show adequate funds available and committed to meet the reasonable and prudent estimated costs of proposed construction and estimated operating expenses for one year, the applicant shall submit such additional information as is necessary to demonstrate financial ability, such as a current income statement and (from sources other than the proposed LMDS license) a statement of projected revenues and expenses.

(iii) The details of any loan or other form of credit arrangement intended to be utilized to finance the proposed construction, acquisition, or operation of the requested facilities including such information as the identity of the creditor(s), letters of commitment, terms of the transaction, and a statement that paragraph (e) of this section is complied with, and the details of any sale or placement of any equity or other form of ownership interest.

(e) *Notice upon default.* In addition to the disclosures required by paragraph (d) of this section, any loan or other credit arrangement providing for a chattel mortgage or secured interest in proposed LMDS facility must include a provision for a minimum of ten (10) days prior written notification to the licensee, and to the Commission, before any such equipment may be repossessed under default provision of the agreement.

21.1012 Spectrum utilization

All applicants for LMDS must submit as part of the application a detailed plan indicating how the bandwidth requested will be utilized. In particular the application must contain detailed descriptions of the cellular configuration with polarization diversity, the modulation method, the channel time sharing method, any error detecting and/or correcting codes, any spatial frequency reuse system and the total data throughput capacity in each of the links in the system. Further, the application must include a separate analysis of the spectral efficiency including both information bits per unit bandwidth and the total bits per unit bandwidth.

21.1013 Repeaters

The licensee of an LMDS system may install repeaters within its GSA, provided that the power flux density of the signal at any given point along the boundary of the BTA emanating from the repeater is no greater than the predicted power flux density from any LMDS transmitter in the BTA at such point.

21.1014 Conditions of licenses

(a) Each licensee initially will receive a five-year license conditioned upon constructing its authorized system within three years of the date of grant. (Other conditions may also apply to individual licensees as determined by the Commission on a case-by-case basis.) The conditional license will authorize exclusive use of either the A-Band or the B-Band within the borders of one BTA, notwithstanding the area covered by the licensee's proposed Geographic Service Area. The following notifications are required:

(i) When all or part of the proposed LMDS system is ready to be placed into operation, the conditional licensee must file a Form 494A, Notification of Completion of Construction, and the relevant fee.

(ii) Licensees must file a letter notification on or before the three-year anniversary date of the grant of the conditional license certifying that the facilities as authorized have been completed and that the entire system as approved is now operational and ready to provide service to the public, and will remain operational during the license period, unless the license is submitted for cancellation.

(b) No extensions of time to construct will be authorized for any reason, including but not limited to:

(i) loss of site availability; and

(ii) any pending application for modification of the authorization.

(c) The provisions of Section 21.44 of this part apply in cases of forfeiture and termination of LMDS station authorizations.

21.1015 Assignment, transfer, or alienation of interest in LMDS authorizations

Notwithstanding any other section of this Part, the sale, transfer, assignment or other alienation of any interest in any LMDS conditional license is prohibited prior to completion of all construction authorized by the conditional grant. This restriction on transfers of interests in LMDS conditional licenses includes any form of alienation including option arrangements and agreements, as well as equity and debt placement plans, with the exception of the following:

(a) involuntary transfers if Sections 21.38(d) and (e) are complied with;

(b) *pro forma* transfers involving no change in ownership interest or control of the license.

21.1016 License modification

Licensees finding it necessary to change any aspect of their proposal as authorized in the conditional license must file an application to modify their authorization, but this will not relieve the licensee from its obligation to proceed with its construction schedule under the terms of its conditional license.

21.1017 License renewal

LMDS licensees must apply for renewal of their licenses no more than 90 (ninety) and no fewer than 30 (thirty) days before the expiration date of the license. Licensees should comply with the provisions of Section 21.11(c) to renew their licenses.

APPENDIX C

FILE NUMBER	APPLICANT	FILE DATE	ACTION DATE	PN DATE	CALL STGN	FEE NUMBER	SERVICE AREA	Report: invent27.ace	Page 1
9318609	CELULARVISION	LA 10/02/1993				8680009001			
9210970	EDELSON, HARRY	AL 01/24/1992		03/25/1992	T	8155255003	BIRMINGHAM		AL
9211077	GHZ BROADCASTING INC	AL 02/20/1992		05/06/1992	T	8155456015	BIRMINGHAM		AL
9211717	KRZETOWSKI, ANDREW	AL 05/26/1992			T	8155019	BIRMINGHAM		AL
9215934	ROBERT ROSENKRANZ	AL 02/13/1992		05/20/1992	T	8155405003	BIRMINGHAM MSA		AL
9218184	CENTENNIAL BROADCASTERS	GA 07/20/1992		06/24/1992	T	8155172006	COLUMBUS MSA		AL
9211450	FORESIGT COMMUNICATIONS	AL 04/20/1992			T	8155901010	HUNTSVILLE		AL
9218224	TOMPKINS, W. WOODRUFF	AL 08/24/1992			T	8155284006	HUNTSVILLE		AL
9218194	KINGWOOD ASSOCIATES	AL 08/05/1992			T	8155224002	MOBILE		AL
9218176	FREDERICK M. PEYSER, JR.	AL 07/06/1992			T	8155142008	MOBILE MSA		AL
9218116	CHARLES D. SNELLING	AL 07/06/1992			T	8155142003	MONTGOMERY		AL
9318631	BSV PARTNERSHIP	AL 10/06/1992			T	8680020009	PENSACOLA PMSA		AL
9211453	FORESIGT COMMUNICATIONS	AR 04/20/1992		06/24/1992	T	8155901007	LITTLE ROCK		AR
9216670	SENVISTA GENERAL	AR 04/08/1992		08/05/1992	T	8155856003	LITTLE ROCK		AR
9218100	SANFORD R. ROBERTSON	AR 06/12/1992			T	8155075011	LITTLE ROCK		AR
9218223	MCKISSOCK, WILLIAM J.	AR 08/24/1992			T	8155284008	LITTLE ROCK		AR
9318601	BSV PARTNERSHIP	AR 10/07/1992			T	8680027002	PINE BLUFF PMSA		AR
9112772	CELULARVISION	AZ 07/15/1991		08/21/1991	TE	8155260008	PHOENIX		AZ
9111272	LDH INTERNATIONAL INC	AZ 02/08/1991		05/15/1991	TE	8155674010	PHOENIX		AZ
9218163	ALDA MULTICHANNELS, LTD.	AZ 06/17/1992			T	8155088007	PHOENIX		AZ
9218003	STEVEN P. SEITER	AZ 03/30/1992			T	8155755002	PHOENIX MSA		AZ
9200463	ALDA MULTICHANNELS	AZ 04/13/1992			T	8155881014	TUCSON		AZ
9200592	BSV PARTNERSHIP	AZ 04/13/1992			T	8155878001	TUCSON		AZ
9200601	PAUL S. BACHOW	AZ 04/14/1992			T	8155888002	TUCSON		AZ
9200650	ASSOCIATED MDS	AZ 04/14/1992			T	8155886002	TUCSON		AZ
9210708	STEVAN A. BIRNBAUM	AZ 12/30/1991		07/29/1992	T	8155037002	TUCSON		AZ
9211426	ASSOCIATED MDS	AZ 06/13/1992		02/12/1992	TE	8155588200	TUCSON		AZ
9216659	ORANGE WIRELESS	AZ 03/06/1992		08/05/1992	T	8155757006	TUCSON		AZ
9216662	M.M. & C.O. VICK PARTNER	AZ 04/14/1992		08/05/1992	T	8155881004	TUCSON		AZ
9215624	ROBERT E. LA BLANC	AZ 01/24/1992		08/05/1992	T	8155887001	TUCSON		AZ
9215624	ROBERT E. LA BLANC	AZ 01/24/1992		03/18/1992	T	8155255005	TUCSON MSA		AZ
9211476	PERRY W. HADDON	AZ 04/23/1992		03/18/1992	T	8155255005	TUCSON MSA		AZ
9215894	SENVISTA GENERAL	AZ 02/26/1992		07/08/1992	T	8155912001	YAVAPAI CO		AZ
9218159	BSV PARTNERSHIP	AZ 06/16/1992		05/13/1992	T	8155481003	YUMA		AZ
9110802	LDH INTERNATIONAL INC	CA 02/19/1991		05/15/1991	TE	8155080006	YUMA		AZ
9211073	KINGWOOD ASSOCIATES	CA 02/20/1992		05/06/1992	T	8155588003			CA
9215868	DR. KIM SLOAN	CA 02/11/1992		05/13/1992	S	8155456001	ANAHEIM		CA
9215868	DR. KIM SLOAN	CA 02/11/1992		05/13/1992	S	8155386007	ANAHEIM		CA
9210764	STEVAN A. BIRNBAUM	CA 01/02/1992		05/13/1992	S	8155386008	ANAHEIM		CA
9215866	SMITH, KATHLEEN	CA 02/11/1992		02/12/1992	TE	8155116010	BAKERSFIELD		CA
9215866	SMITH, KATHLEEN	CA 02/11/1992		05/13/1992	S	8155386009	BAKERSFIELD		CA
9211344	FRIEND, JOHNATHAN E.	CA 04/06/1992		05/13/1992	S	8155386009	BAKERSFIELD		CA
9211355	JOHN C. CANIGLIA	CA 04/06/1992		06/17/1992	T	8155808005	CHICO		CA
9215432	WIRELESS CABLE LTD	CA 12/09/1991		06/24/1992	T	8155816002	CHICO		CA
9218021	PACIFIC COMM. ASSOC., INC	CA 04/28/1992		02/05/1992	S		CHICO		CA
9218013	CABLE SYSTEMS, LTD	CA 04/28/1992			T	8155927006	CHICO		CA
9218019	PONDEROSA CABLE SYSTEMS	CA 04/28/1992			T	8155927003	CONTRA COSTA CTY.		CA
9218020	PONDEROSA CABLE SYSTEMS	CA 04/28/1992			T	8155927002	CONTRA COSTA CTY.		CA
9118155	EVANSTON TRANSMISSION CO	CA 08/22/1991			T	8155927001	CONTRA COSTA CTY.		CA
9218060	TANIS WIRELESS ENTERPRIS	CA 05/18/1992		10/09/1991	TE	8155456003	CORONA		CA
9210699	BAY BROADCASTING ASSOC	CA 12/24/1991		02/12/1992	TE	8155993001	FAIRFIELD/NAPA MSA		CA
9210969	JORGENSEN, DAVID G.	CA 01/24/1992		03/25/1992	T	8155998004	FREMONT		CA
9215540	LEILA L. MAHURIN	CA 01/15/1992		02/05/1992	S	8155255001	FRESNO		CA
9218234	MAHURIN, LEILA L.	CA 08/28/1992			T		FRESNO		CA
9200215	BIRNBAUM A STEVAN	CA 01/24/1992		04/08/1992	T	8155307006	FRESNO, CA MSA		CA

FILE NUMBER	APPLICANT	FILE DATE	ACTION DATE	PN DATE	CALL SIGN	FEE NUMBER	SERVICE AREA	CA
9210734	CITY OF GUSTINE	CA 12/31/1991		02/12/1992	TE	8155068007	GUSTINE	CA
9210733	CITY OF GUSTINE	CA 12/31/1991		02/12/1992	TE	8155068005	HATCH	CA
9210733	CITY OF GUSTINE	CA 01/03/1992		02/12/1992	TE	8155068005	HATCH	CA
9112775	CELLULARVISION	CA 07/15/1991		08/21/1991	TE	8155260009	LOS ANGELES	CA
9218191	PREFERRED WIRELESS COMM	TX 08/03/1992			T	8155219002	LOS ANGELES	CA
9218279	CT COMM. CORP.	CA 09/29/1992			T	8155403005	MODESTO MSA	CA
9218059	TANIS WIRELESS ENTERPRIS	CA 05/18/1992			T	8155993007	MONTEREY MSA	CA
9210276	HOWNANIAN, NINA C.	CA 11/04/1991		11/27/1991	TE	8155778003	OAKLAND	CA
9216617	TELECOM/HADDOCK INVESTOR	CA 03/24/1992		08/05/1992	T	8155703002	OAKLAND	CA
9216627	TELECOM INVESTMENT CORP	CA 03/24/1992		08/05/1992	T	8155704013	OAKLAND	CA
9216589	PATRICIA B. MAILANI	CA 03/06/1992		08/05/1992	T	8155564010	OAKLAND PMSA	CA
9216597	P.M.J. SECURITIES INC	CA 03/16/1992		08/05/1992	C	8155705013	OAKLAND PMSA	CA
9318617	CELULARVISION	CA 10/16/1992			T	8680052005	OAKLAND PMSA	CA
9210916	STEVEN A. BIRNBAUM	CA 01/21/1992		02/19/1992	T	8155233002	OXNARD-VENTURA	CA
9210968	JORGENSEN, DAVID G.	CA 01/24/1992		03/25/1992	T	8155254008	OXNARD-VENTURA	CA
9211072	KINGSWOOD ASSOCIATES	CA 02/20/1992		05/06/1992	T	8155456002	OXNARD/VENTURA	CA
9218011	SUITE 12 GROUP	CA 04/17/1992			T	8155896003	OXNARD/VENTURA	CA
9218063	TANIS WIRELESS ENTERPRIS	CA 05/18/1992			T	8155993004	REDDING MSA	CA
9215348	SUITE 12 GROUP	FL 11/25/1991		01/15/1992	TE		RIVERSIDE	CA
9216620	TELECOM/HADDOCK INVESTOR	CA 03/24/1992		08/05/1992	T	8155703014	RIVERSIDE	CA
9216633	TELECOM INVESTMENT CORP	CA 03/16/1992		08/05/1992	T	8155704007	RIVERSIDE	CA
9215631	LEWIS W. SIEGEL	CA 01/24/1992		03/18/1992	T	8155254009	RIVERSIDE PMSA	CA
9118119	KRIKORIAN, MICHAEL	CA 08/16/1992		10/09/1991	TE	8155430009	SACRAMENTO	CA
9210596	ACOR, EVERETT T	CA 12/09/1991		01/15/1992	TE	8155940014	SACRAMENTO	CA
9200211	CAMBRIDGE MANAGEMENT	CA 01/24/1992		04/08/1992	T	8155254911	SACRAMENTO, CA MSA	CA
9218088	MEEKER, HERBERT S.	CA 06/08/1992			T	8155058001	SACRAMENTO	CA
9218272	IVAN L. WOLFF	CA 09/30/1992			T	868001009	SALINAS SEASIDE MSA	CA
9218186	LINDA CHESTER	CA 07/06/1992			T	8155141007	SALINAS-SEASIDE	CA
9218080	ORANGE WIRELESS PARTN.	CA 05/19/1992			T	8155996011	SAN DIEGO	CA
9218129	S.E. CONE, JR.	CA 05/18/1992			T	8155997004	SAN DIEGO	CA
9218133	JOHN E. BRENNAN	CA 05/14/1992			T	8155983005	SAN DIEGO	CA
9218168	ALDA MULTICHANNELS, LTD.	CA 06/17/1992			T	8188088002	SAN DIEGO	CA
9218235	RPC VENTURES LTD	CA 09/05/1991			T		SAN DIEGO	CA
9215621	R&R TELECOMMUNICATION	CA 01/24/1992		03/18/1992	T	8155255013	SAN DIEGO MSA	CA
9215621	R&R TELECOMMUNICATION	CA 01/24/1992		03/18/1992	T	8155255007	SAN DIEGO MSA	CA
9215635	PRINCETON SCIENTIFIC	CA 01/24/1992		06/10/1992	T	8155464001	SAN DIEGO MSA	CA
9215997	STEVEN P. SEITER	CA 02/24/1992			T	8680052006	SAN DIEGO PMSA	CA
9318616	CELULARVISION	CA 10/16/1992			T	8155260010	SAN FRANCISCO	CA
9112774	CELLULARVISION	CA 07/15/1991		08/21/1991	TE	8155927005	SAN FRANCISCO	CA
9218022	PACIFIC COMM. ASSOC. INC	CA 04/28/1992			T	8680006002	SAN FRANCISCO	CA
9318523	METROCOM TELECASTING	CA 10/01/1992			T	8155564009	SAN JOSE	CA
9211128	HORNBY, HAROLD	CA 03/06/1992		05/13/1992	T	8155611002	SAN JOSE	CA
9211188	LINDEMANN, FRAYDA B.	CA 03/16/1992		05/13/1992	T		SAN JOSE	CA
9215322	WIRELESS CABLE LTD	CA 11/21/1992		01/15/1992	S		SAN JOSE	CA
9215349	SUITE 12 GROUP	FL 11/25/1991		01/15/1992	TE		SAN JOSE	CA
9218109	PMB PARTNERSHIP	CA 06/16/1992			T	8155082007	SAN JOSE	CA
9215620	R&R TELECOMMUNICATION	CA 01/24/1992		03/18/1992	T	8155306004	SAN JOSE PMSA	CA
9215620	R&R TELECOMMUNICATION	CA 01/24/1992		03/18/1992	T	8155306004	SAN JOSE PMSA	CA
9215849	JAMES L. MELCHER	CA 12/31/1992		05/06/1992	S	8155067006	SAN JOSE PMSA	CA
9318507	JACOBS, MICHAEL	CA 10/26/1992			T	8680079004	SAN LUIS OBISPO	CA
9218070	MAURICE & CHARLOTTE VICK	CA 05/18/1992			T	8155997010	SANDIEGO	CA
9218192	PREFERRED WIRELESS COMM	CA 08/03/1992			T	8155219003	SANTA ANA	CA
9211071	KINGSWOOD ASSOCIATES	CA 02/20/1992		05/06/1992	T	8155456004	SANTA BARBARA	CA
9218062	TANIS WIRELESS ENTERPRIS	CA 05/18/1992			T	8155993003	SANTA BARBARA	CA
9218083	SUITE 12 GROUP	CA 06/08/1992			T	8155055001	SANTA BARBARA	CA
9218154	ALTERNATIVE BROADCAST	CA 05/27/1992			T	8155025006	SANTA BARBARA	CA

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9218229	DUNNE/SANTELL/SINGER	CA 08/26/1992		T		8155292003	SANTA BARBARA CA
9218255	CT COMMUNICATIONS CORP	CA 09/29/1992		T		8155398006	SANTA BARBARA CA
9218065	TANIS WIRELESS ENTERPRIS	CA 05/18/1992		T		8155992	SANTA CRUZ CA
9218061	TANIS WIRELESS ENTERPRIS	CA 05/18/1992		T		8155993002	SANTA MARIA CA
9211343	GILIO, ROBIN V.	CA 04/06/1992		T		8155808006	SANTA ROSA CA
9215438	MSGC	CA 12/09/1991		S	06/17/1992		SANTA ROSA CA
9216678	PRISCILLA MARSTON	CA 04/06/1992		T	02/05/1992		SANTA ROSA CA
9218085	SUITE 12 GROUP	CA 06/08/1992		T	08/05/1992		SANTA ROSA CA
9216637	TOTAL TV OF CALIFORNIA	CA 04/13/1992		T		8155055003	SANTA ROSA CA
9218023	PACIFIC COMMUNICATIONS	CA 04/28/1992		T	08/05/1992		SEVEN SPRINGS VALLEY CA
9218058	TANIS WIRELESS ENTERPRIS	CA 05/18/1992		T		8155927004	SHASTA COUNTY CA
9210595	KIM PARTNERSHIP	CA 12/09/1991		T		8155993006	SOLANO CNTY MSA CA
9210960	JORGENSEN, DAVID G.	CA 01/13/1992		TE	01/15/1992		STOCKTON CA
9210963	BUCHWALD, JOSEPH B.	CA 01/15/1992		T	03/04/1992		STOCKTON CA
9211416	HORNBY, HAROLD	CA 04/13/1992		T	03/04/1992		STOCKTON CA
9211417	GILIO, ROBIN V.	CA 04/13/1992		T	06/24/1992		STOCKTON CA
9218064	TANIS WIRELESS ENTERPRIS	CA 05/18/1992		T	06/24/1992		STOCKTON CA
9211442	HORNBY, HENRI R.	WA 04/20/1992		T		8155880001	STOCKTON CA
9218057	TANIS WIRELESS ENTERPRIS	CA 05/18/1992		T	06/24/1992		SUTTER/YUBA MSA CA
9218095	JEANNE P. ROBERTSON	CA 06/12/1992		T		8155992001	TACOMA CA
9210701	CARISSIMI GROUP	CA 12/23/1991		T		8155993005	TULARE MSA CA
9211129	HORNBY, HAROLD	CA 03/06/1992		TE	02/12/1992		VALEJO-NAPA CA
9218106	FRANKLIN B. PIERCE	CA 06/16/1992		T	05/13/1992		VALLEJO CA
9216636	TOTAL TV	CA 04/13/1992		T		8155564009	VALLEJO/NAPA CA
9218274	IVAN L. WOLFF	CA 10/02/1992		T	08/05/1992		VALLEJO/NAPA CA
9212000	HASELTINE, MICHAEL	CO 08/10/1992		T		8155082003	VALLEJO/NAPA CA
9218518	LIKINS, PAUL	CO 10/21/1992		T		8155872002	VICTORVILLE-BARSTOW CA
9216668	SENVISTA GENERAL	CO 10/02/1992		T		8680001008	VILA.TUL.PORVLE.MSA CA
9218174	CHARLES D. SNELLING	CO 04/08/1992		T		8155236003	BOULDER CO
9318511	ROY, ERNEST	CO 06/06/1992		T		8680064003	BOULDER-LONGMONT CO
9117539	JERARD F. MAHER	CO 07/15/1991		S		868001010	COL. SPGS. MSA CO
9218188	BRUNS, ROBERT W.	CO 08/10/1992		T	08/05/1992		COLORADO SPRINGS CO
9216023	WESTERN SIERRA	CO 02/18/1992		T		8155142005	COLORADO SPRINGS CO
9218259	CT COMMUNICATIONS CORP	CT 09/29/1992		T		8680048004	COLORADO SPRINGS CO
9218270	IVAN L. WOLFF	CT 10/02/1992		T			DENVER CO
9318503	MATHES, PHILIP H.	CT 10/02/1992		T		8155237005	PUEBLO CO
9318516	LIKINS, PAUL	CT 10/21/1992		T		8155441017	PUEBLO MSA CO
9215153	BRUCE G. MCNEILL	CT 11/01/1991		TE	12/11/1991		BRIDGEPORT-MILFORD CT
9218046	ORANGE WIRELESS PARTNERS	CT 05/11/1992		T		868001006	BRIDGPRT/MLFORD PMSA CT
9218149	S.E. CONE, JR.	CT 05/11/1992		T		8680011007	DANBURY CT
9200214	CLARK, THOMAS FRANCIS	CT 01/24/1992		T		8680064001	DANBURY CT
9218300	JOS. D. CARNEY & ASSC.	CT 09/30/1992		T			HARTFORD CT
9210589	G/H GARFINKLE TRUST	CT 12/03/1992		T	04/08/1992		HARTFORD CT
9218119	PEYSER, FREDERICK M.	CT 07/06/1992		TE		8155306008	HARTFORD MSA CT
9218298	JOS. D. CARNEY & ASSC.	CT 10/02/1992		T	01/15/1992		HARTFORD MSA CT
9215139	BEVERLY MARSTON	CT 10/30/1991		T		8155916009	NEW HAVEN CT
9218241	CHESTER, LINDA	CT 09/16/1992		S		8155143003	NEW HAVEN CT
9218256	CT COMMUNICATIONS CORP	CT 09/29/1992		T	12/11/1991		NEW HAVEN MSA CT
9218233	SMITH, WILLIAM L.	CT 08/24/1992		T		8680003001	STAMFORD CT
9112776	B SQUARED INC	DC 07/17/1991		TE			STAMFORD CT
9218303	JOS. D. CARNEY 7 ASSC.	DC 09/30/1992		T		8155359002	STAMFORD CT
9215504	M3 ILLINOIS TELECOM CORP	PA 01/13/1992		S		8155398007	STAMFORD CT
9200452	ASSOCIATED MDS CORPORATI	DE 04/06/1992		T		8155287001	WATERBURY CT
9200529	ASSOCIATED MDS CORP.	DE 04/06/1992		T		8155263004	WASHINGTON DC
9200555	BACHOW, PAUL S.	DE 04/06/1992		T		8680003006	WASHINGTON DC HSA DC
							WILLMINGTON DE
							WILLMINGTON DE
							WILMINGTON DE
							WILMINGTON DE

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9200586	CONE, S.E., JR	DE 04/06/1992		07/05/1992	T	8155811003	WILMINGTON	DE
9211350	GOLDBERG, ROSALIE Y.	DE 04/06/1992		06/17/1992	T	8155818006	WILMINGTON	DE
9211418	KINGSWOOD ASSOCIATES	CT 04/13/1992		06/24/1992	T	8155880006	WILMINGTON	DE
9215499	RICHARD C. WOODBRIDGE	DE 01/07/1992		02/05/1992	S		WILMINGTON	DE
9218008	ORANGE WIRELESS PARTNERS	DE 04/06/1992			T	8155811008	WILMINGTON	DE
9211921	RICHARD C. WOODBRIDGE	DE 07/06/1992		08/05/1992	T	8155141006	WILMINGTON PMSA	DE
9318632	BSV PARTNERSHIP	DE 10/06/1992			T	8155705016	WILMINGTON PMSA	FL
9216594	SEAVIEW TELESYSTEMS	FL 03/16/1992		08/05/1992	T	8155091005	BRADENTON	FL
9211830	HIGH BAND BROADCASTING	FL 06/18/1992		07/29/1992	T	8155025007	BRADENTON MSA	FL
9218155	ALTERNATIVE BROADCAST	FL 05/27/1992			T	8155278001	DAYTONA BEACH	FL
9218220	PEYSER, FREDERICK M.	FL 08/19/1992			T	8155441001	DAYTONA BEACH	FL
9218001	CT COMMUNICATIONS CORP	FL 10/27/1992			T	8155441009	DAYTONA MSA	FL
9200261	ACOR, EVERETT T. JR.	FL 02/18/1992		04/15/1992	T	815565007	FORT PIERCE	FL
9218001	WJB-TV FT. PIERCE LIMITE	FL 03/06/1992			T	8155705009	FT LAUDERDALE	FL
9216607	P.M.J. SECURITIES INC	FL 03/16/1992		08/05/1992	C	8155705017	FT LAUDERDALE	FL
9216611	SEAVIEW TELESYSTEMS	FL 03/16/1992		08/05/1992	C	8155704004	FT LAUDERDALE	FL
9216638	TELECOM INVESTMENT CORP	FL 03/16/1992		08/05/1992	T	8155703006	FT LAUDERDALE	FL
9216648	TELECOM/HADDOCK INVESTOR	FL 03/24/1992		02/05/1992	S		FT MEYERS MSA	FL
9215440	OCEAN PARTNERSHIP	FL 12/09/1991		06/03/1992	T	8155810002	FT MYERS	FL
9211309	FRIEND, JOHNATHAN E.	FL 04/07/1992		02/05/1992	S	8155146002	FT MYERS	FL
9215498	S & W PRODUCTIVE	FL 01/07/1992		08/05/1992	S	8155705003	FT MYERS	FL
9216603	SAFECOM PARTNERSHIP	FL 03/16/1992		08/05/1992	C	8155703003	FT MYERS	FL
9216616	TELECOM/HADDOCK INVESTOR	FL 03/16/1992		08/05/1992	T	8155704008	FT MYERS	FL
9216632	TELECOM INVESTMENT CORP	FL 03/16/1992		08/05/1992	T	8155076005	FT MYERS MSA	FL
9218169	BMW ASSOCIATES	FL 06/12/1992		02/05/1992	S	8155177005	FT PIERCE	FL
9215506	M3 ILLINOIS TELECOM CORP	PA 01/13/1992			T	8155939006	FT PIERCE	FL
9218025	MAH, INC.	FL 05/01/1992		08/05/1992	T	8155813006	FT PIERCE MSA	FL
9216683	MITCHELL & CO.	FL 04/06/1992		01/15/1992	S		FT. LAUDERDALE	FL
9215320	WIRELESS CABLE LTD	FL 11/25/1991		01/15/1992	TE	8155874003	FT. LAUDERDALE	FL
9215347	SUITE 12 GROUP	FL 11/25/1991			T	8680027001	FT. LAUDERDALE	FL
9318600	BSV PARTNERSHIP	FL 10/07/1992			T	8155287002	GAINSVILLE MSA	FL
9218033	SMITH, WILLIAM L.	FL 08/24/1992		07/15/1992	T	8155811015	JACKSONVILLE	FL
9200530	ASSOCIATED MDS CORP	FL 04/06/1992		07/15/1992	T	8155818003	JACKSONVILLE	FL
9200546	JOHN E. BRENNAN	FL 04/06/1992		07/15/1992	T	8155817003	JACKSONVILLE	FL
9200553	PAUL S. BACHON	FL 04/06/1992		07/15/1992	T	8155811001	JACKSONVILLE	FL
9200588	S.E. CONE, JR.	FL 04/06/1992		03/04/1992	T	8155182001	JACKSONVILLE	FL
9210962	CROWLEY, JEFFERY B.	FL 01/14/1992		03/25/1992	T	8155305007	JACKSONVILLE	FL
9210973	FEINBERG, JUDY	FL 01/24/1992		06/03/1992	T	8155810003	JACKSONVILLE	FL
9211311	LEVIN, MICHAEL H.	FL 04/06/1992		06/17/1992	T	8155818002	JACKSONVILLE	FL
9211348	LINDEMANN, FRAYDA B.	FL 04/06/1992		02/05/1992	TE		JACKSONVILLE	FL
9215442	NEW SOUTH ASSOCIATES	FL 12/05/1991			T	8155811010	JACKSONVILLE	FL
9218006	ORANGE WIRELESS PARTNERS	FL 04/06/1992		04/29/1992	T	8155370005	JACKSONVILLE MSA	FL
9215811	SMITH, KATHLEEN	FL 02/10/1992		08/05/1992	T	8155564015	JACKSONVILLE MSA	FL
9216584	PATRICIA B. MAILANI	FL 03/06/1992		06/10/1992	T	8155464001	LAKELAND MSA	FL
9215998	SUBSCRIBER TV PARTNERS	FL 02/20/1992			T	8155237004	LAKELAND/WINTER HAVE	FL
9218208	MARX, ROBERT O.	FL 08/10/1992			T	8155403008	LAKELAND/HVN MSA	FL
9218282	CT COMM. CORP.	FL 09/29/1992			T	8155940008	MELBOURNE	FL
9215437	MELBOURNE ASSOCIATES	FL 12/09/1991		02/05/1992	S	8155705007	MELBOURNE	FL
9216609	SAFECOM PARTNERSHIP	FL 03/16/1992		08/05/1992	C	8155704003	MELBOURNE	FL
9216639	TELECOM INVESTMENT CORP	FL 03/16/1992		08/05/1992	T	8155703007	MELBOURNE	FL
9216647	TELECOM/HADDOCK INVESTOR	FL 03/16/1992		08/05/1992	T	8155815005	MELBOURNE	FL
9216680	ROBERT A. PAINNEUF	FL 04/06/1992		08/05/1992	T	8155565006	MELBOURNE	FL
9218000	LIMITED PARTNERSHIP	FL 03/06/1992			T	8155076003	MELBOURNE MSA	FL
9218171	BMW ASSOCIATES	FL 06/12/1992		09/25/1991	S	8155263001	MTAMI	FL
9117535	MITCHELL & CO. LTD	FL 07/15/1991		08/05/1992	T			FL
9200733	BACHON, PAUL S.	FL 05/12/1992			T	8155968002	MTAMI	FL

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9211604	FOUR M MLDs GROUP	FL 05/11/1992		07/08/1992 T		8155963002	MIAMI	FL
9215319	WIRELESS CABLE LTD	FL 11/25/1991		01/15/1992 S			MIAMI	FL
9218050	ORANGE WIRELESS PARTNERS	FL 05/11/1992		T		8155962005	MIAMI	FL
9218146	CONE, S.E., JR.	FL 05/11/1992		T		8155964007	MIAMI	FL
9218199	VICK, MAURICE M. & CHARL	FL 08/07/1992		T		8155234007	MIAMI	FL
9218289	JOS. D. CAREY ASSC.	FL 09/30/1992		T		8680002002	MIAMI MSA	FL
9200461	CACTUS TV INTERESTS	FL 04/13/1992		T		8155880008	NAPLES MSA	FL
9218204	MATHES, PHILIP H.	FL 08/10/1992		T		8155237006	OCALA	FL
9216020	SUBSCRIBER TV PARTNERS	FL 02/20/1992		T		8155237003	ORANGE COUNTY	FL
9218209	MONTGOMERY, ROBERT L.	NY 08/10/1992		T		8155882010	ORLANDO	FL
9200466	CONE, S.E., JR.	FL 04/13/1992		T		8155888004	ORLANDO	FL
9200603	PAUL S. BACHOW	FL 04/14/1992		T		8155755003	ORLANDO	FL
9200633	ACOR, EVERETT T. JR.	FL 03/30/1992		T		8155116011	ORLANDO	FL
9210763	FEINBERG, JUDY	FL 01/02/1992		02/12/1992 TE		8155234007	ORLANDO	FL
9210901	EDELSON, HARRY	FL 01/21/1992		T		8155882005	ORLANDO	FL
9211429	FOUR M MLDs GROUP	FL 04/13/1992		T		8155881002	ORLANDO	FL
9216661	ORANGE WIRELESS	FL 04/13/1992		T		8155887002	ORLANDO	FL
9216667	M.M. & C.O. VICK PARTNER	FL 04/14/1992		T		8155896004	ORLANDO	FL
9218010	SUITE 12 GROUP	FL 04/17/1992		T			ORLANDO	FL
9218287	ASSC. MDS CORP.	FL 04/14/1992		T		8155877004	ORLANDO MSA	FL
9200459	CROWLEY, JEFFERY B.	FL 04/13/1992		T		8155923002	PENSACOLA	FL
9215367	SHENANDOAH GROUP	NC 12/05/1991		01/29/1992 S		8155705015	PENSACOLA	FL
9216595	P.M.J. SECURITIES INC	FL 03/16/1992		08/05/1992 C		8155703009	PENSACOLA	FL
9216612	TELECOM/HADDOCK INVESTOR	FL 03/16/1992		08/05/1992 C		8155704001	PENSACOLA	FL
9216641	TELECOM INVESTMENT CORP	FL 03/16/1992		T		8155403007	PENSACOLA	FL
9218281	CT COMM. CORP.	FL 09/29/1992		T		8155177014	SARASOTA	FL
9215509	M3 ILLINOIS TELECOM CORP	PA 01/13/1992		02/05/1992 S		8155705008	SARASOTA	FL
9216608	P.M.J. SECURITIES INC	FL 03/16/1992		08/05/1992 C		8155703004	SARASOTA	FL
9216615	TELECOM/HADDOCK INVESTOR	FL 03/16/1992		08/05/1992 C		8155704010	SARASOTA	FL
9216630	TELECOM INVESTMENT CORP	FL 03/16/1992		T		8155939007	SARASOTA	FL
9218038	MAH INC	FL 05/01/1992		T		8155076004	SARASOTA	FL
9218170	BMW ASSOCIATES	FL 06/12/1992		T		8155813007	SARASOTA MSA	FL
9216682	MITCHELL & CO.	FL 04/06/1992		06/24/1992 T		8155815004	TALLAHASSEE	FL
9211373	LANDERS, HAROLD S. III	FL 04/06/1992		02/05/1992 TE		8155923007	TALLAHASSEE	FL
9215443	NEW SOUTH ASSOCIATES	FL 12/05/1991		10/09/1991 TE		8155456002	TAMPA	FL
9118156	EVANSTON TRANSMISSION CO P	FL 08/23/1991		08/05/1992 T		8155991001	TAMPA	FL
9200739	BACHOW, PAUL S.	FL 05/15/1992		T		8155996001	TAMPA	FL
9211691	FOUR M MLDs GROUP	FL 05/18/1992		T		8155997011	TAMPA	FL
9218071	M.M. & C.O. VICK PARTNER	FL 05/18/1992		T		8155996009	TAMPA	FL
9218081	ORANGE WIRELESS PARTNERS	FL 05/18/1992		T		8155997008	TAMPA	FL
9218125	CONE, S.E., JR.	FL 05/18/1992		T		8680003008	TAMPA MSA	FL
9218305	JOS.D. CARNEY & ASSC.	FL 09/30/1992		T		8155254005	TAMPA-ST PETE MSA	FL
9215630	MYERS, FREDERICK M.	FL 01/24/1992		03/18/1992 T		8155254005	TAMPA-ST PETE MSA	FL
9215630	MYERS, FREDERICK M.	FL 01/24/1992		07/08/1992 T		8155982006	TAMPA/ST PETERSBURG	FL
9211620	ILOHCA CORP.	FL 06/18/1992		07/29/1992 T		8155091004	TAMPA/ST PETERSBURG	FL
9211831	HIGH BAND BROADCASTING	FL 04/06/1992		08/05/1992 T		8155810006	TRUCKERS CORNER	FL
9216672	PATRICIA B. MAILANI	FL 01/06/1992		02/12/1992 TE		8155123006	W PALM BEACH	FL
9210735	CORNBLATT, ARNOLD	FL 03/16/1992		08/05/1992 C		8155705010	W PALM BEACH	FL
9216606	P.M.J. SECURITIES INC	FL 03/16/1992		T		8155703015	W PALM BEACH	FL
9216619	TELECOM/HADDOCK INVESTOR	FL 03/16/1992		T		8155704011	W PALM BEACH	FL
9216629	TELECOM INVESTMENT CORP	FL 11/21/1991		T		8155860005	W. PALM BEACH	FL
9215324	WIRELESS CABLE LTD	FL 05/11/1992		T		8155964013	WEST PALM BCH	FL
9218140	CONE, S.E., JR.	FL 06/16/1992		07/29/1992 T		8155082001	WEST PALM BEACH	FL
9200662	BSV PARTNERSHIP	FL 11/04/1991		12/26/1991 TE		8155778004	WEST PALM BEACH	FL
9210420	DARRIN, DRAKE	FL 03/06/1992		T		8155564006	WEST PALM BEACH	FL
9211131	HORNBY, HAROLD	FL 03/06/1992		T				FL

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9211559	FOUR M MLDs GROUP	FL 05/11/1992		07/08/1992	T	8155963007	WEST PALM BEACH	FL
9218040	ORANGE WIRELESS PARTNERS	FL 05/11/1992			T	8155962015	WEST PALM BEACH	FL
9218201	M.M. & C.O. VIC PARTNERS	FL 08/07/1992			T	8155232001	WEST PALM BEACH	FL
9218185	CLASSIC BROADCASTING	GA 07/20/1992			T	8155172004	ATHENS MSA	GA
9218310	JOS. D. CARNEY & ASSOC.	GA 09/30/1992			T	8680004006	ATLANTA MSA	GA
9218177	PEYSER, FREDERICK M. JR	GA 07/06/1992			T	8155142007	AUGUSTA	GA
9218218	GLOBAL TELECOMMUNICATION	GA 08/10/1992			T	8155237002	AUGUSTA	GA
9318514	BUTLER, ELIOT	GA 10/15/1992			T	8680048006	AUGUSTA	GA
9112779	GLENDAIRE INC	GA 07/17/1991		10/02/1991	TE	8155265010	CUMMING	GA
9218213	JACOBS, MICHAEL	GA 08/10/1992			T	8155236001	SAVANNAH	GA
9218017	UMDA TELECOM	GU 04/28/1992			T	8155926004	AGANA	GU
9218018	UMDA TELECOM	GU 04/28/1992			T	8155926008	GARAPAN	GU
9218015	UMDA TELECOM	GU 04/28/1992			T	8155926006	LUPOG	GU
9218236	WESTERN SYSTEMS INC	GU 08/31/1992			T	8155301005	MARIANAS ISLANDS	GU
9218237	WESTERN SYSTEMS INC	GU 08/31/1992			T	8155301004	MARIANAS ISLANDS	GU
9218238	TROPIC ISLES CABLE TV	GU 08/31/1992			T	8155301007	MARIANAS ISLANDS	GU
9218239	TROPIC ISLES CABLE TV	GU 08/31/1992			T	8155301006	MARIANAS ISLANDS	GU
9218014	UMDA TELECOM	GU 04/28/1992			T	8155926007	TAMUNING	GU
9218016	UMDA TELECOM	GU 04/29/1992			T	8155926005	TINIAN	GU
9218215	HUGHES, LEONARD	HI 08/10/1992		05/06/1992	T	8155236005	HILLO	HI
9200366	FAITH C. AMBY	HI 03/06/1992		08/05/1992	T	8155564003	HONOLULU	HI
9200745	PAUL S. BACHOW	HI 01/01/1993		12/26/1991	TE		HONOLULU	HI
9210458	HOVANIAN, PARIS H.	HI 11/27/1991		08/05/1992	T	8155886002	HONOLULU	HI
9211678	FRAYDA B. LINDEMANN	HI 05/14/1992		07/15/1992	T	8155984003	HONOLULU	HI
9211685	FOUR M MLDs GROUP	HI 05/18/1992		07/15/1992	T	8155996007	HONOLULU	HI
9215439	OCEAN PARTNERSHIP	HI 12/09/1991		02/05/1992	S		HONOLULU	HI
9218069	ORANGE WIRELESS PARTNERS	HI 05/18/1992			T	8155996013	HONOLULU	HI
9218072	MAURICE & CHARLOTTE VICK	HI 05/18/1992			T	8155997012	HONOLULU	HI
9218128	CONE, S.E., JR.	HI 05/18/1992			T	8155997005	HONOLULU	HI
9218132	BRENNAN, JOHN E.	HI 05/14/1992			T	8155983006	HONOLULU	HI
9318625	CELULARVISION	HI 10/06/1992			T	8680020003	HONOLULU PMSA	HI
9215510	M3 ILLINOIS TELECOM CORP	PA 01/13/1992		02/05/1992	S	8155177013	DES MOINES	IA
9216622	TELECOM/HADDOCK INVESTOR	IA 03/16/1992		08/05/1992	T	8155703012	DES MOINES	IA
9216635	TELECOM INVESTMENT CORP	IA 03/16/1992		08/05/1992	T	8155704005	DES MOINES	IA
9216681	PRISCILLA MARSTON	IA 04/06/1992		08/05/1992	T	8155815007	DES MOINES	IA
9218260	CT COMMUNICATIONS CORP	IA 09/29/1992			T	8155404002	DES MOINES	IA
9216604	P.M.J. SECURITIES INC	IA 03/16/1992		08/05/1992	C	8155705002	DES MOINES MSA	IA
9218034	MAH INC	IA 05/01/1992			T	8155939011	DES MOINES MSA	IA
9318520	SKYLINE ENTRTNMNT NETWORK	ID 10/23/1992			T	8680075015	COEUR D'ALENE	ID
9218267	PAUL LIKINS	IL 09/30/1992			T	868001003	AURORA-ELGIN, IL PMS	IL
9216676	ROCHELLE SILVIA	IL 04/06/1992		08/05/1992	T	8155816007	AURORA-ELGIN	IL
9215503	M3 ILLINOIS TELECOM CORP	PA 01/13/1992		02/05/1992	S	8155177008	AURORA-ELGIN PMSA	IL
9218037	MAH INC	IL 05/04/1992			T	8155939010	AURORA-ELGIN PMSA	IL
9318521	SPECCHIO DEVELOPERS	IL 10/27/1992			T	8680087005	CHAMPAIGN	IL
9318522	EVANS MICROWAVE, INC.	IL 10/27/1992			T	8680087006	CHAMPAIGN	IL
9112773	CELLULARVISION	IL 07/15/1991		08/21/1991	TE	8155260007	CHICAGO	IL
9218093	PALLISADES BROADCASTING	IL 06/12/1992			T	8155075001	CHICAGO	IL
9218230	ALDA MULTICHANNELS LTD	IL 08/20/1992			T	8155281004	CHICAGO	IL
9218240	EVANS MICROWAVE, INC.	IL 09/10/1992			T	8155339001	CHICAGO	IL
9110797	LDH INTERNATIONAL INC	IL 02/19/1991		05/15/1991	TE	8155585003	CHICAGO MSA	IL
9218297	JOS. D. CARNEY & ASSC.	IL 09/30/1992			T	8680002010	CHICAGO MSA	IL
9218179	SPECCHIO DEVELOPERS, LTD	IL 07/16/1992		02/05/1992	S	8155168002	CHICAGO PMSA	IL
9215507	M3 ILLINOIS TELECOM CORP	PA 01/13/1992		06/24/1992	T	8155177004	DAVENPORT-MOLINE ISL	IL
9211376	DANADIAN, ARAM	IL 04/06/1992			T	8155813004	DAVENPORT-MOLINE-	IL
9218030	MAH INC	IL 05/01/1992			T	8155939015	DAVENPORT/ROCK ISLAN	IL
9112268	EVANSTON TRANSMISSION CO	IL 06/07/1991		06/26/1991	TE	8155092008	DUPAGE/COOK CTY PMSA	IL

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9200664	BSV PARTNERSHIP	IL 06/16/1992		07/29/1992 T		8155082009	JOLIET PMSA	IL
9211182	GHZ BROADCASTING INC	IL 03/16/1992		05/13/1992 T		8155609006	JOLIET PMSA	IL
9218265	PAUL LIKINS	IL 09/30/1992				868001001	JOLIET, IL PMSA	IL
9200549	BSV PARTNERSHIP	IL 04/06/1992		07/15/1992 T		8155813001	LAKE COUNTY PMSA	IL
9215505	M3 ILLINOIS TELECOM CORP	PA 01/13/1992		02/05/1992 S		8155177006	LAKE COUNTY PMSA	IL
9218026	MAH INC	IL 05/04/1992				8155939005	LAKE COUNTY PMSA	IL
9218101	SANFORD R. ROBERTSON	IL 06/12/1992				8155075009	LAKE COUNTY PMSA	IL
9211713	ILHCA CORP.	IL 05/21/1992		07/15/1992 T		8155013008	PEORIA	IL
9211833	HIGH BAND BROADCASTING	IL 06/18/1992		07/29/1992 T		8155091001	PEORIA	IL
9216674	RONALD E. SANSAC	IL 04/06/1992		08/05/1992 T		8155816001	ROCKFORD	IL
9215513	M3 ILLINOIS TELECOM CORP	PA 01/13/1992		02/05/1992 S		8155177010	ROCKFORD MSA	IL
9218029	MAH INC	IL 05/04/1992				8155939014	ROCKFORD MSA	IL
9218228	SMITH, WILLIAM L.	IL 08/24/1992				8155287003	EVANSVILLE	IN
9218157	ALTERNATIVE BROADCAST	IN 05/27/1992				8155025009	FT WAYNE MSA	IN
9318269	PAUL LIKINS	IN 10/02/1992				868001005	GARY/HAMMOND PMSA	IN
9318276	CT COMM. CORP.	IN 10/02/1992				8155403002	GARY/HAMMOND PMSA	IN
9118339	JMJ ASSOCIATES	IN 09/11/1991		10/30/1991 TE		8155522001	INDIANAPOLIS	IN
9200468	ASSOCIATED MDS CORP.	IN 04/13/1992		07/15/1992 T		8155886006	INDIANAPOLIS	IN
9200596	BMB PARTNERSHIP	IN 04/13/1992		07/15/1992 T		8155878004	INDIANAPOLIS	IN
9200602	BACHOW, PAUL S.	IN 04/13/1992		02/12/1992 TE		8155888001	INDIANAPOLIS	IN
9210709	CORNBLATT, ARNOLD	IN 12/26/1991		02/12/1992 TE		8155032001	INDIANAPOLIS	IN
9210716	HORNBY, HAROLD	IN 12/30/1991		02/12/1992 TE		8155043004	INDIANAPOLIS	IN
9210717	AMBY, FAITH C.	IN 12/30/1991		02/12/1992 TE		8155043003	INDIANAPOLIS	IN
9210718	LEVIN, MICHAEL H.	IN 12/30/1991		02/05/1992 TE		8155043002	INDIANAPOLIS	IN
9215419	PATRICIA MILANA	IN 12/30/1991		08/05/1992 T		8155703011	INDIANAPOLIS	IN
9216623	TELECOM/HADDOCK INVESTOR	IN 03/16/1992		08/05/1992 T		8155881003	INDIANAPOLIS	IN
9216660	ORANGE WIRELESS	IN 04/13/1992		08/05/1992 T		8155887004	INDIANAPOLIS	IN
9216664	M.M. & C.O. VICK PARTNER	IN 04/15/1992		08/05/1992 T		8155705001	INDIANAPOLIS MSA	IN
9216599	P.M.J. SECURITIES INC	IN 03/16/1992		08/05/1992 C		8680004007	INDIANAPOLIS MSA	IN
9318311	JOS. D. CARNEY & ASSOC.	IN 10/02/1992				8155970002	WICHITA	KS
9200724	BACHOW, PAUL S.	KS 05/12/1992		08/05/1992 T		8155963014	WICHITA	KS
9211552	FOUR M MIDS GROUP	KS 05/11/1992		07/08/1992 T		8155815003	WICHITA	KS
9215444	NEW SOUTH ASSOCIATES	FL 12/05/1991		02/05/1992 TE		8155962007	WICHITA	KS
9216679	PRISCILLA MARSTON	KS 04/06/1992		08/05/1992 T		8155065002	WICHITA	KS
9218052	ORANGE WIRELESS PARTNERS	KS 05/12/1992				8155964015	WICHITA	KS
9218089	HERBERT S. MEEKER	KS 05/14/1992				8155142006	LEXINGTON-FAYETTE	KY
9218138	S.E. CONE, JR.	KS 05/14/1992				8155456001	LOUISVILLE	KY
9218178	FREDERICK M. PEYSER	KY 06/06/1992		10/09/1991 TE			LOUISVILLE	KY
9118157	EVANSTON TRANSMISSION CO	KY 08/23/1991		02/05/1992 S		8155601018	LOUISVILLE	KY
9215430	WIRELESS CABLE LTD	KY 12/09/1991		08/05/1992 T		8155067005	LOUISVILLE MSA	KY
9216583	SENVISTA GENERAL	KY 03/13/1992		05/06/1992 T		8155075003	BATON ROUGE	LA
9215850	DIANE WECHSLER	KY 12/31/1991				8155968006	BATON ROUGE	LA
9218098	JEANNE P. ROBERTSON	LA 06/12/1992		08/05/1992 T		8155963016	BATON ROUGE	LA
9200731	BACHOW, PAUL S.	LA 05/12/1992		07/08/1992 T		8155962009	BATON ROUGE	LA
9211550	FOUR M MIDS GROUP	LA 05/11/1992				8155065001	BATON ROUGE	LA
9218054	ORANGE WIRELESS PARTNERS	LA 05/11/1992				8155964014	BATON ROUGE	LA
9218086	HERBERT S. MEEKER	LA 06/09/1992				8155234006	BATON ROUGE	LA
9218139	S.E. CONE, JR.	LA 05/14/1992				8155456004	NEW ORLEANS	LA
9218207	VICK, MAURICE M & CHARLO P	LA 08/07/1992		10/09/1991 TE		8155940016	NEW ORLEANS	LA
9118154	EVANSTON TRANSMISSION CO	LA 08/22/1991		02/05/1992 S		8155705012	NEW ORLEANS	LA
9215434	WIRELESS CABLE LTD	KY 12/09/1991		08/05/1992 C		8155703010	NEW ORLEANS	LA
9216598	P.M.J. SECURITIES INC	LA 03/16/1992		08/05/1992 T		8155704014	NEW ORLEANS	LA
9216624	TELECOM/HADDOCK INVESTOR	LA 03/24/1992		05/15/1991 TE		8155674007		MA
9216626	TELECOM INVESTMENT CORP	MA 02/08/1991						MA
9111269	LDH INTERNATIONAL INC	MA 02/08/1991						MA
9215321	WIRELESS CABLE LTD	MA 11/25/1991		01/15/1992 S				MA

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9216610	SEAVIEW TELESYSTEMS	FL 03/16/1992		08/05/1992	C	8155705018	BOSTON	MA
9218166	ALDA MULTICHANNELS, LTD.	MA 06/17/1992			T	8155088004	BOSTON	MA
9318306	JOS. D. CARNEY & ASSC.	MA 09/30/1992			T	8680003009	BOSTON MSA	MA
9117538	PRISCILLA MARSTON	MA 07/15/1991		09/25/1991	S	8155265008	GREATER BOSTON	MA
9215942	WESTERN SIERRA	TX 02/18/1992		05/20/1992	T	8155441011	LAWRENCE PMSA	MA
9211922	LAURENCE FRAIBERG	MA 07/07/1992		08/05/1992	T	8155414100	LAWRENCE-HAVERHILL	MA
9318283	CT COMM. CORP.	MA 09/29/1992			T	8155403009	LAWRENCE-HAVERHILL MSA	MA
9218253	CT COMMUNICATIONS CORP	MA 09/29/1992			T	8155398005	LOWELL	MA
9218266	PAUL LIKINS	MA 09/30/1992			T	868001002	LOWELL, MA-NK PMSA	MA
9200737	BACHOW, PAUL S.	MA 05/12/1992		08/05/1992	T	8155971004	NEW BEDFORD	MA
9211548	FOUR M MLD'S GROUP	MA 05/11/1992		07/08/1992	T	8155963018	NEW BEDFORD	MA
9218056	ORANGE WIRELESS PARTNERS	MA 05/11/1992			T	8155962011	NEW BEDFORD	MA
9318612	CELULARVISION	MA 10/02/1992			T	8680011005	NEW BEDFORD PMSA	MA
9218250	CT COMMUNICATIONS CORP	MA 09/29/1992			T	8155398002	SALEM-GLOUCESTER	MA
9318500	CONNECTICUT HOME THEATER	MA 10/01/1992			T	8680013001	SPRINGFIELD	MA
9318271	IVAN L. WOLFF	MA 09/30/1992			T	868001007	SPRINGFIELD MSA	MA
9215516	GARTH MOSS	MA 01/14/1992		02/05/1992	S		SPRINGFIELD PMSA	MA
9200732	BACHOW, PAUL S.	MA 05/12/1992		08/05/1992	T	8155968001	WORCESTER	MA
9211554	FOUR M MLD'S GROUP	MA 05/11/1992		07/08/1992	T	8155963012	WORCESTER	MA
9215517	GENE C. SABORIN	MA 01/14/1992		02/05/1992	S		WORCESTER	MA
9218143	S.E. CONE, JR.	MA 05/11/1992			T	8155964010	WORCESTER	MA
9218257	CT COMMUNICATIONS CORP	MA 09/29/1992			T	8155398008	WORCESTER	MA
9318307	JOS. D. CARNEY & ASSOC.	MA 09/30/1992			T	8680003010	WORCESTER	MA
9200429	ACOR, EVERETT T. JR.	MA 02/20/1992		04/24/1992	T	8155456010	WORCESTER MSA	MA
9218047	ORNG. WIRE PART.	MA 05/12/1991			T	8155962014	WORCESTER PMSA	MA
9318620	CELULARVISION	MA 10/16/1992			T	8680052002	WORCESTER PMSA	MA
9218299	JOS. D. CARNEY & ASSC.	MD 09/30/1992			T	8680003002		MD
9210585	BRUCE BOSSARD	MD 12/03/1991		01/15/1992	TE		BALTIMORE	MD
9211191	LINDEMANN, FRAYDA B.	MD 03/16/1992		05/13/1992	T	8155611004	BALTIMORE	MD
9215615	DIANE WECHSLER	MD 01/24/1992		03/18/1992	T	8155254001	BALTIMORE	MD
9200262	ACOR, EVERETT T. JR.	MD 02/18/1992		04/15/1992	T	8155441008	BALTIMORE MSA	MD
9215888	VIDEO COMMUNICATIONS	MD 02/26/1992		05/13/1992	T	8155482006	BALTIMORE MSA	MD
9216480	NORTHEAST WIRELESS	ME 03/16/1992		08/05/1992	T	8155609010	PORTLAND MSA	ME
9218278	CT COMM. CORP.	MI 09/29/1992			T	8155403004		MI
9218251	CT COMMUNICATIONS CORP	MI 09/29/1992			T	8155398003	ANN ARBOR	MI
9215512	M3 ILLINOIS TELECOM CORP	PA 01/13/1992		02/05/1992	S		ANN ARBOR PMSA	MI
9216684	SALLIE DIFEDLE	MI 04/06/1992		08/05/1992	T	8155813005	ANN ARBOR PMSA	MI
9218024	M A H INC	MI 05/04/1992			T	8155939004	ANN ARBOR PMSA	MI
9111266	LDH INTERNATIONAL INC	MI 02/11/1991		05/15/1991	TE	8155682006	DETROIT	MI
9112778	E 82 LTD	MI 07/17/1991		08/21/1991	TE	8155264005	DETROIT	MI
9318286	MARK SILBERMAN	MI 10/02/1992			T		DETROIT	MI
9318294	JOS. D. CAREY & ASSC.	MI 10/02/1992			T	8680002007	DETROIT MSA	MI
9211860	HIGH BAND BRDSC. CORP.	MI 06/23/1992		07/09/1992	T	8155098004	FLINT MSA	MI
9218158	ALTN. BROADCAST. NETWORK	MI 05/27/1992			T	8155025010	FLINT MSA	MI
9211080	GHZ BROADCASTING INC	MI 02/24/1992		05/06/1992	T	8155456012	GRAND RAPIDS	MI
9218090	HERBERT S. MEEKER	MI 06/09/1992			T	8155065004	GRAND RAPIDS	MI
9318614	CELULARVISION	MI 10/02/1992			T	8680011008	GRAND RAPIDS PMSA	MI
9218206	METTLER COMMUNICATIONS	MI 08/07/1992			T	8155232006	JACKSON	MI
9318613	CELULARVISION	MI 10/02/1992			T	8680011006	LANSING PMSA	MI
9215514	M3 ILLINOIS TELECOM CORP	PA 01/13/1992		02/05/1992	S	8155177016	SAG. BAY CTY. MLD. MSA	MI
9211374	MARILYN DONNELLY	MI 04/08/1992		06/24/1992	T	8155815008	SAGINAW-BAY CITY	MI
9218262	CT COMMUNICATIONS CORP	MI 09/29/1992			T	8155404004	SAGINAW-BAY CITY -	MI
9218027	MAH INC	MI 05/04/1992			T	8155939012	SAGINAW/BAY CITY MSA	MI
9216650	PAUL D. RICE	MN 04/14/1992		08/05/1992	T	8155880011	MINN/ST PAUL	MN
9215550	R&R TELECOMMUNICATION	MN 01/21/1992		02/12/1992	S	8155234008	MINN/ST. PAUL MSA	MN
9215867	DR. KIM SLOAN	MN 02/11/1992		05/13/1992	S	8155386008	MINN/ST. PAUL MSA	MN

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9215867	DR. KIM SLOAN	P MN 02/11/1992		05/13/1992	S	8155386008	MINN/ST. PAUL MSA	MN
9200419	PAUL S. BACHOW	P MN 03/16/1992		06/24/1992	T	8155610004	MINNEAPOLIS	MN
9200425	JOHN E. BRENNAN	P MN 03/18/1992		05/13/1992	T	8155612003	MINNEAPOLIS	MN
9211187	LINDEMANN, FRAYDA B.	P MN 03/18/1992		01/15/1992	TE	8155612005	MINNEAPOLIS	MN
9210590	BRYANNET	P MN 12/05/1991		01/15/1992	T	8155938001	MINNEAPOLIS-ST PAUL	MN
9210590	BRYANNET	P MN 12/09/1991		08/05/1992	S	8155938001	MINNEAPOLIS-ST PAUL	MN
9216577	WESTERN SIERRA	P MN 03/16/1992		08/05/1992	S	8155609001	MINNEAPOLIS-ST PAUL	MN
9211915	FARROW & STINSKI	P MN 07/06/1992		05/15/1991	TE	8155138002	MINNEAPOLIS, ST PAUL	MN
9111271	LDH INTERNATIONAL INC	P MO 02/08/1991		09/25/1991	S	8155674009	KANSAS CITY	MO
9117536	ANDREW WAHL	P MO 07/15/1991		10/09/1991	TE	8155088006	KANSAS CITY	MO
9218164	ALDA MULTICHANNELS LTD	P MO 06/17/1992		07/15/1992	T	8155469001	ST LOUIS	MO
9118177	HOVNANIAN, ARMEN	P MO 08/26/1991		08/05/1992	T	8155814004	ST LOUIS	MO
9200564	ALDA MULTICHANNELS LTD	P MO 04/06/1992		07/15/1992	T	8155983003	ST LOUIS	MO
9200744	BACHOW, PAUL S.	P MO 05/14/1992		02/05/1992	S	8155996008	ST LOUIS	MO
9211684	FOUR M MIDS GROUP	P KY 12/09/1991		08/05/1992	T	8155940017	ST LOUIS	MO
9215435	WIRELESS CABLE LTD	P MO 04/06/1992		08/05/1992	T	8155810007	ST LOUIS	MO
9216673	PATRICIA B. MAILANI	P MO 05/19/1992		03/18/1992	T	815597014	ST. LOUIS	MO
9218068	ORANGE WIRELESS PARTNERS	P MO 05/18/1992		03/18/1992	T	8680020002	ST. LOUIS PMSA	MO
9218078	M & C VICK PARTNERS	P MO 05/18/1992		03/18/1992	T	8155254002	ST. LOUIS, MSA	MO
9218127	S.E. CONE, JR.	P MO 05/18/1992				8680009003	JACKSON	MS
9318624	CELULARVISION	P MO 10/06/1992		08/05/1992	T	8680048005	JACKSON	MS
9215616	R&R TELECOMMUNICATION	P MO 01/24/1992		10/09/1992	TE	8155969001	CHAFLOTTE	NC
9215616	R&R TELECOMMUNICATION	P MO 01/24/1992		03/25/1992	T	8155430008	CHARLOTTE	NC
9318502	MATHES, PHILIP H.	P MS 10/02/1992		07/15/1992	T	8155255002	CHARLOTTE	NC
9318512	BUTLER, HILLARY	P MS 10/15/1992				8155019004	CHARLOTTE	NC
9200730	BACHOW, PAUL S.	P NC 05/12/1992				8155962017	CHARLOTTE	NC
9118118	BOSSARD, THOMAS H.	P NC 08/19/1991		05/13/1992	T	8155964018	CHARLOTTE	NC
9210971	EDELSON, HARRY	P NC 01/27/1992		07/08/1992	T	8680002004	CHARLOTTE MSA	NC
9211716	KRZETOWSKI, ANDREW	P NC 05/26/1992		07/08/1992	T	8155481007	CHARLOTTE	NC
9218042	ORANGE WIRELESS PARTNERS	P NC 05/12/1992		02/19/1992	T	8155963009	CHARLOTTE	NC
9218135	CONE ENTERPRISES, INC.	P NC 05/11/1992		01/29/1992	S	8155596005	FAYETTEVILLE	NC
9218291	JOS. D. CAREY & ASSC.	P NC 09/30/1992		08/05/1992	C	8155191002	GREENSBORO	NC
9215890	VIDEO COMMUNICATIONS	P PA 02/26/1992		08/05/1992	C	8155705006	GREENSBORO	NC
9211557	FOUR M MIDS GROUP	P NC 05/11/1992		08/05/1992	C	8155704006	GREENSBORO	NC
9211609	FM VIDEO BROADCASTERS	P NC 05/12/1992		08/05/1992	C	8680002006	GREENSBORO	NC
9210868	HAYES, THOMAS	P NC 01/17/1992		03/18/1992	T	8155255006	GREENSBORO MSA	NC
9215366	SHENANDOAH GROUP	P NC 12/05/1991		08/05/1992	T	8155564013	GREENSBORO MSA	NC
9216600	P.M.J. SECURITIES INC	P NC 03/16/1992				8680020007	GREENSBORO PMSA	NC
9216613	TELECOM/HADDOCK INVESTOR	P NC 03/24/1992		06/24/1992	T	8155612001	RALEIGH	NC
9216634	TELECOM INVESTMENT CORP	P NC 03/16/1992		05/13/1992	T	8155612006	RALEIGH	NC
9218293	JOS. D. CAREY & ASSC.	P NC 09/30/1992		01/15/1992	TE	8155916004	RALEIGH-DURHAM	NC
9215636	PRINCETON SCIENTIFIC	P NC 01/24/1992		02/19/1992	T	8155896005	RALEIGH-DURHAM	NC
9216586	PATRICIA B. MAILANI	P NC 03/06/1992		07/08/1992	T	8155178006	RALEIGH-DURHAM	NC
9318629	BSV PARTNERSHIP	P NC 10/06/1992		08/05/1992	T	8155901012	RALEIGH-DURHAM	NC
9200423	BACHOW, PAUL S.	P NC 03/13/1992		08/05/1992	T	8155138001	BISMARCK	ND
9200427	JOHN E. BRENNAN	P NC 03/18/1992		08/05/1992	T	8155617005	WILLISTON	ND
9211186	LINDEMANN, FRAYDA B.	P NC 03/18/1992		06/03/1992	T	8155808009	OMAHA	NE
9210584	CAMBRIDGE RESEARCH LABS	P NC 12/05/1991				8155815006	OMAHA	NE
9200594	BSV PARTNERSHIP	P NC 04/15/1992				8155810005	OMAHA	NE
9210861	CORNBLETT, ARNOLD	P NC 01/15/1992						
9211459	ILOHCA CORP	P NC 04/21/1992						
9218120	RONALD STINSKI	P ND 07/06/1992						
9216581	NORTHWEST COMMUNICATIONS	P ND 03/16/1992						
9200542	FAITH C. AMBY	P NE 04/06/1992						
9200548	BSV PARTNERSHIP	P NE 04/06/1992						
9211313	HORNBY, HAROLD	P NE 04/07/1992						

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9215431	WIRELESS CABLE LTD	P KY 12/09/1991		02/05/1992 S			OMAHA	NE
9215459	DIANE WECHSLER	P NE 12/26/1991		02/05/1992 TE			OMAHA	NE
9218092	SANFORD R. ROBERTSON	P NE 06/12/1992		T		8155075007	OMAHA	NE
9218036	M A H INC.	P NJ 05/04/1992		T		8155939009		NJ
9210862	CELLULARVISION	P NJ 01/15/1992		02/19/1992 T		8155183006	ATLANTIC CITY	NJ
9215508	M3 ILLINOIS TELECOM CORP	P NJ 01/13/1992		02/05/1992 S			ATLANTIC CITY	NJ
9216685	ORION BROADCASTING	P NJ 04/03/1992		08/05/1992 T			ATLANTIC CITY	NJ
9218280	CT COMM. CORP.	P NJ 09/29/1992		T		8155939003	ATLANTIC CITY MSA	NJ
9218032	MAH INC	P NJ 05/04/1992		T			BERGEN-PASSAIC	NJ
9200296	CELLULAR VISION, INC.	P NJ 03/02/1992		T		8155995008	BERGEN-PASSAIC	NJ
9211683	KRETZOWSKI, ANDREW J.	P NJ 05/18/1992		T		8155141003	BERGEN-PASSAIC	NJ
9211924	FRAIBERG, LAWRENCE	P NJ 07/06/1992		T		8155306007	BERGEN-PASSAIC	NJ
9215628	ROBERT E. LA BLANC	P NJ 01/24/1992		03/18/1992 T		8155306007	BERGEN-PASSAIC PMSA	NJ
9215628	ROBERT E. LA BLANC	P NJ 01/24/1992		03/18/1992 T		8155456017	BERGEN-PASSAIC	NJ
9211075	GHZ BROADCASTING INC	P NJ 02/24/1992		05/06/1992 T		8155513004	BERGEN-PASSAIC	NJ
9200295	CELLULARVISION	P NJ 03/02/1992		T		815595010	JERSEY CITY	NJ
9211681	KRETZOWSKI, ANDREW J.	P NJ 05/18/1992		T		8155141002	JERSEY CITY	NJ
9211925	FRAIBERG, LAWRENCE	P NJ 07/06/1992		T		8155306005	JERSEY CITY PMSA	NJ
9215627	ROBERT E. LA BLANC	P NJ 01/24/1992		03/18/1992 T		8155306005	JERSEY CITY PMSA	NJ
9215627	ROBERT E. LA BLANC	P NJ 01/24/1992		03/18/1992 T		8155441013	JERSEY CITY PMSA	NJ
9215938	WESTERN SIERRA	P NJ 02/18/1992		05/20/1992 T		8155962016	LONG BEACH	NJ
9218041	ORANGE WIRELESS PARTNERS	P NJ 05/12/1992		T		8155964019	LONG BEACH	NJ
9218134	CONE, S.E., JR.	P NJ 05/14/1992		T		8155970001	LONG BRANCH	NJ
9200725	BACHOW, PAUL S.	P NJ 05/12/1992		T		8155963008	LONG BRANCH	NJ
9211558	FOUR M MLDs GROUP	P NJ 05/11/1992		T			MIDDLESEX-SOMERSET	NJ
9200298	CELLULAR VISION, INC.	P NJ 03/02/1992		T		8155141010	MIDDLESEX-SOMERSET	NJ
9211918	HASCOE, NORMAN	P NJ 07/06/1992		T		8155143002	MIDDLESEX-SOMERSET	NJ
9218118	FREEDOM TECHNOLOGIES	P NJ 07/06/1992		T		8155456018	MIDDLESEX-SOMERSET	NJ
9211066	GHZ BROADCASTING INC	P NJ 02/20/1992		05/06/1992 T			MONMOUTH-OCEAN	NJ
9200297	CELLULAR VISION, INC.	P NJ 03/02/1992		T		8155141004	MONMOUTH-OCEAN	NJ
9211923	FRAIBERG, LAWRENCE	P NJ 07/06/1992		T		8155370002	MONMOUTH-OCEAN PMSA	NJ
9215814	SMITH, KATHLEEN	P NJ 02/10/1992		04/29/1992 T		8680027003	MONMOUTH/OCEAN	NJ
9318602	BSV PARTNERSHIP	P NJ 10/07/1992		T		8155441013	MONMOUTH/OCEAN PMSA	NJ
9215939	WESTERN SIERRA	P NJ 02/18/1992		05/20/1992 T		8155916002	NEWARK	NJ
9210586	NICHOLAS GARFINKLE	P NJ 12/05/1991		01/15/1992 TE		8155037001	NEWARK	NJ
9210713	FEINBERG, JUDY R.	P NJ 12/30/1991		02/12/1992 TE		8155902001	NEWARK	NJ
9211443	HORNBY, HENRI R.	P NJ 04/21/1992		06/24/1992 T		8155813002	TRENTON	NJ
9200563	CELLULAR VISION, INC.	P NJ 04/06/1992		T			TRENTON	NJ
9215511	M3 ILLINOIS TELECOM CORP	P PA 01/13/1992		02/05/1992 S		8155403003	TRENTON PMSA	NJ
9218275	CT COMM. CORP.	P NJ 09/29/1992		T		8155939013	WILMINGTON PMSA	NJ
9218028	MAH INC	P NJ 05/04/1992		T		8155116012	ALBUQUERQUE	NM
9210762	BUCHWALD, JOSEPH B.	P NM 01/02/1992		02/12/1992 TE		8155877003	ALBUQUERQUE	NM
9200458	JEFFERY B. CROWLEY	P NM 04/13/1992		07/08/1992 T		8155878005	ALBUQUERQUE	NM
9200597	BMB PARTNERSHIP	P NM 04/13/1992		07/15/1992 T		8155998003	ALBUQUERQUE	NM
9210700	AKZ INVESTORS	P NM 12/24/1991		02/12/1992 TE		8155757005	ALBUQUERQUE	NM
9216591	SENVISTA GENERAL	P NM 03/06/1992		08/05/1992 T		8155370003	ALBUQUERQUE MSA	NM
9215813	SMITH, KATHLEEN	P NM 02/10/1992		04/29/1992 T		8155564014	ALBUQUERQUE MSA	NM
9216585	PATRICIA B. MAILANI	P NM 03/06/1992		08/05/1992 T		8155236007	CLOVIS	NM
9218212	HADDON, PERRY W.	P NM 08/10/1992		T		8155236008	HOBBS	NM
9218216	HADDON, PERRY W.	P NM 08/10/1992		T		8155172003	LAS CRUCES	NM
9211941	HADDON, PERRY W.	P NM 07/20/1992		T		8155236009	ROSWELL	NM
9218219	HADDON, PERRY W.	P NM 08/10/1992		T		8155172001	SANTA FE	NM
9218180	HADDON, PERRY W.	P NM 06/20/1992		T		8155236002	CARSON CITY	NV
9218217	JACOBS, MICHAEL	P NV 08/10/1992		T		8155612002	LAS VEGAS	NV
9200428	JOHN E. BRENNAN	P NV 03/16/1992		T				
9211189	LINDEMANN, FRAYDA B.	P NV 03/18/1992		T		8155611001	LAS VEGAS	NV

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9211190	BACHOW, PAUL S.	P NV 03/18/1992		05/13/1992 T		8155611005	LAS VEGAS	NV
9215350	SUITE 12 GROUP	P FL 11/25/1991		01/15/1992 TE			LAS VEGAS	NV
9218167	ALDA MULTICHANNELS LTD	P NV 06/17/1992				8155088003	LAS VEGAS	NV
9218187	ALDA MULTICHANNELS LTD	P NV 07/10/1992				8155154003	LAS VEGAS	NV
9215625	ROBERT E. LA BLANC	P NV 01/24/1992		03/18/1992 T		8155255004	LAS VEGAS MSA	NV
9215625	ROBERT E. LA BLANC	P NV 01/24/1992		03/18/1992 T		8155255004	LAS VEGAS MSA	NV
9216022	VIRGINIA COMMUNICATIONS	P NV 02/20/1992		06/10/1992 T		8155456011	LAS VEGAS MSA	NV
9200547	BSV PARTNERSHIP	P NV 04/06/1992		07/15/1992 T		8155815002	RENO	NV
9210657	CYRUS PARTNERSHIP	P NV 12/10/1991		02/05/1992 TE		8155940007	RENO	NV
9211132	HORNBY, HAROLD	P NV 03/09/1992		05/13/1992 T		8155564005	RENO	NV
9211132	HORNBY, HAROLD	P NV 04/07/1992		05/13/1992 T		8155564005	RENO	NV
9211345	FRIEND, JOHNATHAN E.	P NV 04/07/1992		06/17/1992 T		8155808004	RENO	NV
9200528	ASSOCIATED MDS CORP.	P NY 04/06/1992		07/15/1992 T		8155817006	ALBANY	NY
9200550	BACHOW, PAUL S.	P NY 04/06/1992		07/15/1992 T		8155811005	ALBANY	NY
9200584	CONE, S.E., JR	P NY 03/17/1992		05/13/1992 T		8155609009	ALBANY	NY
9211175	KINGSHOOD ASSOCIATES	P NY 04/07/1992		06/17/1992 T		8155808008	ALBANY	NY
9211346	HORNBY, HENRI R.	P NY 04/07/1992		06/24/1992 T		8155813003	ALBANY	NY
9211375	RUSSELL HEDDEN	P NY 04/08/1992				8155811006	ALBANY	NY
9218005	ORANGE WIRELESS PARTNERS	P NY 04/07/1992		02/05/1992 S			ALBANY, SCHEN, TROY	NY
9215485	R&R TELECOMMUNICATION	P NY 01/03/1992		05/13/1992 T		8155482002	ALBANY, SCHEN, TROY	NY
9215881	MICHAEL S. SIEGEL	P NY 02/26/1992		06/03/1992 T		8155771002	ALBANY-SCHENECTADY-T	NY
9211260	EASTERN MICROWAVE, INC.	P PA 04/03/1992		07/29/1992 T		8155082010	ALBANY/TROY	NY
9200663	BSV PARTNERSHIP	P NY 06/16/1992		07/29/1992 T		8155048005	BINGHAMTON-JOHNSON	NY
9211802	EASTERN MICROWAVE, INC.	P NY 06/04/1992		07/08/1992 T		8155982007	BUFFALE PMSA	NY
9211619	ILOHCA CORP	P NY 05/14/1992		08/05/1992 T		8155969004	BUFFALO	NY
9200727	BACHOW, PAUL S.	P NY 05/12/1992		04/15/1992 TE		8155874004	BUFFALO	NY
9210448	BOSSARD, MARK	P NY 11/26/1991		05/13/1992 T		8155609007	BUFFALO	NY
9211181	KINGSHOOD ASSOCIATES	P NY 03/17/1992		07/08/1992 T		8155954004	BUFFALO	NY
9211539	EASTERN MICROWAVE, INC.	P NY 05/08/1992		07/08/1992 T		8155963001	BUFFALO	NY
9211605	FOUR M MLDs GROUP	P NY 05/11/1992		07/08/1992 T		8155990010	BUFFALO	NY
9211673	ASSOCIATED MDS CORP.	P NY 05/18/1992		07/15/1992 T		8155964006	BUFFALO	NY
9218147	S.E. CONE, JR.	P NY 05/11/1992				8680004010	BUFFALO MSA	NY
9218314	JOS. D. CARNEY & ASSOC.	P NY 09/30/1992		05/13/1992 T		8155482003	BUFFALO PMSA	NY
9215880	VIDEO COMMUNICATIONS	P NY 02/26/1992		04/08/1992 T		8155306003	BUFFALO, NY PMSA	NY
9200213	CAMBRIDGE MANAGEMENT	P NY 01/24/1992				8155048003	ELMIRA-CORNING	NY
9211804	EASTERN MICROWAVE, INC.	P NY 06/04/1992		07/29/1992 T		8155048004	ITHACA MSA	NY
9211803	EASTERN MICROWAVE, INC.	P NY 06/04/1992		06/17/1992 T		8155808007	NASSAU-SUFFOLK	NY
9211347	HORNBY, HENRI R.	P NY 04/07/1992		03/18/1992 T		8155306006	NASSAU-SUFFOLK PMSA	NY
9215626	ROBERT E. LA BLANC	P NY 01/24/1992		03/18/1992 T		8155306006	NASSAU-SUFFOLK PMSA	NY
9215626	ROBERT E. LA BLANC	P NY 01/24/1992		09/02/1992 T		8155212009	NEW YORK	NY
9200791	CELLTEL COMMUNICATIONS	P NY 07/31/1992		01/29/1992 TE		8155966003	NEW YORK	NY
9210656	HYE CREST MANAGEMENT	MP NY 12/17/1991				8680003005	NEW YORK MSA	NY
9218302	JOS. D. CARNEY & ASSC.	P NY 09/30/1992				8155172005	NIAGRA FALLS PMSA	NY
9218182	NIAGRA PARTNERS	P NY 06/20/1992				8155172005	NIAGRA FALLS PMSA	NY
9218182	NIAGRA PARTNERS	P NY 06/20/1992				8155172005	NIAGRA FALLS PMSA	NY
9218182	NIAGRA PARTNERS	P NY 06/20/1992				8155172005	NIAGRA FALLS PMSA	NY
9218182	NIAGRA PARTNERS	P NY 06/20/1992				8155172005	NIAGRA FALLS PMSA	NY
9215441	NORTON GARFINKLE	P NY 12/04/1992		02/05/1992 TE		8155172005	NIAGRA FALLS PMSA	NY
9218252	CT COMMUNICATIONS CORP	P NY 09/29/1992					OCEANSIDE	NY
9216024	WESTERN SIERRA	P NY 02/18/1992		06/10/1992 T		8155398004	ORANGE COUNTY	NY
9211805	EASTERN MICROWAVE, INC.	P NY 06/04/1992				8155441016	ORANGE COUNTY PMSA	NY
9200714	ASSOCIATED MDS CORP.	P NY 05/15/1992		08/05/1992 T		8155048002	POUGHKEEPSIE-KINGSTO	NY
9200723	BACHOW, PAUL S.	P NY 05/12/1992		08/05/1992 T		8155990004	ROCHESTER	NY
9211180	KINGSHOOD ASSOCIATES	P NY 03/17/1992		05/13/1992 T		8155970003	ROCHESTER	NY
9211180	KINGSHOOD ASSOCIATES	P NY 03/17/1992		05/13/1992 T		8155609008	ROCHESTER	NY

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9211601	FOUR M MLDs GROUP	NY 05/11/1992				8155963005	ROCHESTER	NY
9211712	EASTERN MICROWAVE, INC.	NY 05/20/1992		07/15/1992		8155008001	ROCHESTER	NY
9211826	HASCOE, NORMAN	NY 06/17/1992				8155087003	ROCHESTER	NY
9216642	SCNY COMMUNICATIONS INC	NY 03/16/1992				8155703016	ROCHESTER	NY
9218043	ORANGE WIRELESS PARTNERS	NY 05/12/1992				8155962003	ROCHESTER	NY
9218105	ALEXANDER N. MITCHELL	NY 06/16/1992				8155082005	ROCHESTER	NY
9218145	S.E. CONE, JR.	NY 05/11/1992				8155964008	ROCHESTER	NY
9218153	ALTERNATIVE BROADCAST NT	NY 05/27/1992				8155025005	ROCHESTER MSA	NY
9218313	JOS. D. CARNEY & ASSOC.	NY 09/30/1992				8680004009	ROCHESTER MSA	NY
9318621	CELULARVISION	NY 10/16/1992				8680052007	ROCHESTER PMSA	NY
9211079	GHZ BROADCASTING INC	NY 02/24/1992		05/06/1992		8155456013	SYRACUSE	NY
9211540	EASTERN MICROWAVE, INC.	NY 05/08/1992		07/08/1992		8155954003	SYRACUSE	NY
9211812	KING BROADCASTING ASSOC	NY 06/08/1992				8155058004	SYRACUSE	NY
9211832	HIGH BAND BROADCASTING	NY 06/18/1992				8155091002	SYRACUSE	NY
9216644	SCNY COMMUNICATIONS INC	NY 03/16/1992				8155703019	SYRACUSE	NY
9218097	JEANNE P. ROBERTSON	NY 06/12/1992				8155075004	SYRACUSE	NY
9218242	RICHARD CARL LEVY PART	NY 09/16/1992				8155357001	SYRACUSE	NY
9211806	EASTERN MICROWAVE, INC.	NY 06/04/1992				8155048001	UTICA-ROME	NY
9218007	ORANGE WIRELESS PARTNERS	OH 04/07/1992				8155811009		OH
9211616	ILOHCA CORP	OH 05/14/1992		07/08/1992		8155982010	AKRON	OH
9218243	RICHARD CARL LEVY PART	OH 09/16/1992				8155357003	AKRON	OH
9318288	JOS. D. CARNEY & ASSC.	OH 10/02/1992				8680002001	AKRON	OH
9318513	ROY, SHIELA ANN	OH 10/15/1992				8680048003	AKRON	OH
9215622	R&R TELECOMMUNICATION	OH 01/24/1992		03/18/1992		8155255010	AKRON PMSA	OH
9215622	R&R TELECOMMUNICATION	OH 01/24/1992		03/18/1992		8155255010	AKRON PMSA	OH
9218172	CHARLES D. SNEILING	OH 06/12/1992				8155142002	AKRON PMSA	OH
9211859	HIGH BAND BROADCASTING	OH 06/22/1992		07/29/1992		8155098005	AKRON	OH
9218113	MARK SILBERMAN	OH 06/30/1992				8155121003	CANTON	OH
9218261	CT COMMUNICATIONS CORP	OH 09/29/1992				8155404003	CANTON	OH
9216579	NORTHEAST WIRELESS	OH 03/16/1992		08/05/1992		8155609003	CANTON MSA	OH
9318312	JOS. D. CARNEY & ASSOC.	OH 10/02/1992				8680004008	CANTON MSA	OH
9211617	ILOHCA CORP	OH 05/14/1992		07/07/1992		8155982009	CINCINNATI	OH
9117818	STUART M. PERLOW	OH 09/11/1991		10/16/1991	TE		CINCINNATI	OH
9211687	FOUR M MLDs GROUP	OH 05/18/1992		07/15/1992		8155996005	CINCINNATI	OH
9215633	PRINCETON SCIENTIFIC	OH 01/24/1992				8155255012	CINCINNATI	OH
9218067	ORANGE WIRELESS PARTNERS	OH 05/19/1992		03/18/1992		8155996015	CINCINNATI	OH
9218077	MAURICE & CHARLOTTE VICK	OH 05/18/1992				8155997015	CINCINNATI	OH
9218126	S.E. CONE, JR.	OH 05/18/1992				8155997007	CINCINNATI	OH
9318292	JOS. D. CARNEY & ASSC.	OH 10/02/1992				8680002005	CINCINNATI MSA	OH
9318623	CELULARVISION	OH 10/06/1992				8680020001	CINCINNATI PMSA	OH
9112913	EVANSTON TRANSMISSION CO	OH 07/30/1991		09/25/1991	TE	8155346003	CLEVELAND	OH
9211682	ANDREW J. KRZETOWSKI	OH 05/19/1992		07/15/1992		8155995009	CLEVELAND	OH
9211690	FOUR M MLDs GROUP	OH 05/18/1992				8155996002	CLEVELAND	OH
9215632	PRINCETON SCIENTIFIC	OH 01/24/1992		07/15/1992		8155306002	CLEVELAND	OH
9218073	MARK K. SHAH	OH 05/19/1992		03/18/1992		8155995011	CLEVELAND	OH
9218074	MAURICE & CHARLOTTE VICK	OH 05/19/1992				8155997013	CLEVELAND	OH
9218079	ORANGE WIRELESS PARTNERS	OH 05/18/1992				8155996010	CLEVELAND	OH
9218124	S.E. CONE, JR.	OH 05/18/1992				8155997009	CLEVELAND	OH
9318290	JOS. D. CARNEY & ASSC.	OH 10/02/1992				8680002002	CLEVELAND MSA	OH
9200526	ASSOCIATED MDS CORP.	OH 04/06/1992				8155811013	COLUMBUS	OH
9200552	BACHOM, PAUL S.	OH 04/06/1992				8155817004	COLUMBUS	OH
9200589	PAUL LIKINS	OH 04/06/1992				8155811011	COLUMBUS	OH
9200595	BMB PARTNERSHIP	OH 04/13/1992		07/15/1992		8155878002	COLUMBUS	OH
9211340	HORNBY, HENRI R.	OH 04/02/1992		06/17/1992		8155810008	COLUMBUS	OH
9211421	KELLY, PAUL N.	OH 04/14/1992		06/24/1992		8155880010	COLUMBUS	OH
9215522	SAVPHILL GROUP	OH 01/14/1992		02/05/1992	TE		COLUMBUS	OH

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9215546	DIANE WECHSLER	OH 01/21/1992		02/12/1992	T		COLUMBUS	OH
9215879	VIDEO COMMUNICATIONS	OH 02/26/1992		02/13/1992	S	8155482004	COLUMBUS MSA	OH
9210598	DAYTON WIRELESS	OH 12/10/1991		01/15/1992	TE	8155940003	DAYTON	OH
9216605	P.M.J. SECURITIES INC	OH 03/16/1992		08/05/1992	C	8155705011	DAYTON	OH
9216614	TELECOM/HADDOCK INVESTOR	OH 03/24/1992		08/05/1992	C	8155703005	DAYTON	OH
9216631	TELECOM INVESTMENT CORP	OH 03/16/1992		08/05/1992	T	8155704009	DAYTON	OH
9215617	R&R TELECOMMUNICATION	OH 01/24/1992		03/18/1992	T	8155254004	DAYTON MSA	OH
9215617	R&R TELECOMMUNICATION	OH 01/24/1992		03/18/1992	T	8155254004	DAYTON MSA	OH
9318295	JOS. D. CARNEY & ASSC.	OH 10/02/1992		07/29/1992	T	8680002008	DAYTON MSA	OH
9318611	CELLULARVISION	OH 10/02/1992		07/29/1992	T	8680011002	DAYTON PMSA	OH
9211861	HIGH BAND BROADCASTING	OH 06/23/1992		05/13/1992	T	8155098003	HAMILTON	OH
9211856	ALTERNATIVE BROADCAST NT	OH 05/27/1992		05/13/1992	T	8155025008	HAMILTON	OH
9215893	SENVISTA GENERAL	OH 02/26/1992		05/13/1992	T	8155481004	LIMA	OH
9218103	PMB PARTNERSHIP	OH 06/16/1992		08/05/1992	T	8155082008	LIMA	OH
9211947	MARK J. KONRAD	OH 07/20/1992		05/13/1992	T	8155177001	TOLEDO	OH
9215892	SENVISTA GENERAL	OH 02/26/1992		05/13/1992	T	8155481005	TOLEDO	OH
9218110	PMB PARTNERSHIP	OH 06/17/1992		05/20/1992	T	8155082013	TOLEDO	OH
9318301	JOS. D. CAREY & ASSC.	OH 10/02/1992		05/20/1992	T	8680003004	TOLEDO	OH
9215935	ROBERT ROSENKRANZ	AL 02/13/1992		05/13/1992	T	8155405004	TOLEDO MSA	OH
9218175	CHARLES D. SNELLING	OH 06/06/1992		05/13/1992	T	8155142004	TOLEDO MSA	OH
9211184	FM VIDEO BROADCASTERS	OH 03/17/1992		05/13/1992	T	8155609005	YOUNGSTOWN	OH
9218112	MARK SILBERMAN	OH 07/01/1992		05/13/1992	T	8155121006	YOUNGSTOWN	OH
9318304	JOS. D. CARNEY & ASSC.	OH 10/02/1992		04/08/1992	T	8680003007	YOUNGSTOWN MSA	OH
9218049	ORANGE WIRELESS PARTNERS	OK 05/12/1992		04/08/1992	T	8155962019	OKLAHOMA CITY	OK
9200209	CAMBRIDGE MANAGEMENT	OK 01/24/1992		08/05/1992	T	8155254013	OKLAHOMA CITY	OK
9200726	BACHOW, PAUL S.	OK 05/12/1992		08/05/1992	T	8155970007	OKLAHOMA CITY	OK
9211553	FOUR M MLDs GROUP	OK 05/11/1992		08/05/1992	T	8155963013	OKLAHOMA CITY	OK
9211811	KRZETOWSKI, ANDREW	OK 06/08/1992		08/05/1992	T	8155058002	OKLAHOMA CITY	OK
9216669	SENVISTA GENERAL	OK 04/08/1992		08/05/1992	T	8155856004	OKLAHOMA CITY	OK
9218048	ORANGE WIRELESS PARTNERS	OK 05/12/1992		08/05/1992	T	8155962013	OKLAHOMA CITY	OK
9218102	ROBERTSON, SANFORD R.	OK 06/12/1992		08/05/1992	T	8155075010	OKLAHOMA CITY	OK
9218141	CONE, S.E., JR.	OK 05/11/1992		08/05/1992	T	8155964012	OKLAHOMA CITY	OK
9218244	RICHARD CARL LEVY PART	OK 09/16/1992		08/05/1992	T	8155357002	OKLAHOMA CITY	OK
9318615	CELLULARVISION	OK 10/02/1992		08/05/1992	T	8680011009	OKLAHOMA PMSA	OK
9200734	BACHOW, PAUL S.	OK 05/12/1992		05/06/1992	T	8155968003	TULSA	OK
9211078	GHZ BROADCASTING INC	OK 02/24/1992		05/06/1992	T	8155456014	TULSA	OK
9211555	FOUR M MLDs GROUP	OK 05/11/1992		08/05/1992	T	8155963011	TULSA	OK
9216671	SENVISTA GENERAL	OK 04/08/1992		08/05/1992	T	8155856002	TULSA	OK
9218084	SUITE 12 GROUP	OK 06/08/1992		08/05/1992	T	8155055002	TULSA	OK
9218087	MEEKER, HERBERT S.	OK 06/09/1992		08/05/1992	T	8155065005	TULSA	OK
9218107	ROBERTSON, SANFORD R.	OK 06/12/1992		08/05/1992	T	8155075008	TULSA	OK
9218142	CONE, S.E., JR.	OK 05/11/1992		08/05/1992	T	8155964011	TULSA	OK
9218246	RICHARD CARL LEVY PART	OK 09/22/1992		08/05/1992	T	8155379003	TULSA	OK
9318619	CELLULARVISION	OK 10/16/1992		08/05/1992	T	8680052003	TULSA PMSA	OK
9218203	TAGGART, ROBERT B.	OR 08/10/1992		06/10/1992	T	8155237008	EUGENE	OR
9216021	SUBSCRIBER TV PARTNERS	OR 02/20/1992		04/08/1992	T	8155456005	EUGENE MSA	OR
9200210	CAMBRIDGE MANAGEMENT	OR 01/24/1992		04/08/1992	T	8155254012	PORTLAND	OR
9210865	CELLULARVISION	OR 01/16/1992		02/19/1992	T	8155187004	PORTLAND	OR
9215515	NORTHWEST TELECOMMUNICAT	OR 01/13/1992		02/05/1992	S		PORTLAND	OR
9218031	WILLAMETTE VALLEY BROAD	OR 05/04/1992		03/18/1992	T	8155939002	PORTLAND PMSA	OR
9215629	MYERS, FREDERICK M.	OR 01/24/1992		03/18/1992	T	8155254006	PORTLAND PMSA	OR
9215629	MYERS, FREDERICK M.	OR 01/24/1992		03/18/1992	T	8155254006	PORTLAND PMSA	OR
9211185	FM VIDEO BROADCASTERS	OR 03/17/1992		05/13/1992	T	8155609002	SALEM	OR
9218114	SILBERMAN, MARK	OR 06/30/1992		11/27/1991	TE	8155121004	SALEM	OR
9200735	BACHOW, PAUL S.	PA 05/12/1992		11/27/1991	TE	8155968004	ALLENTOWN	PA
9210279	HUMMEL, DELORES	PA 11/04/1991		11/27/1991	TE	8155778007	ALLENTOWN	PA

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9211556	FOUR M MLDs GROUP	PA 05/11/1992				8155963010	ALLENTOWN PA
9218044	ORANGE WIRELESS PARTNERS	PA 05/12/1992				8155962018	ALLENTOWN PA
9218136	CONE, S.E., JR.	PA 05/14/1992				8155964017	ALLENTOWN PA
9218196	METTLER COMMUNICATIONS	PA 08/05/1992				8155224005	ALLENTOWN PA
9318630	BSV PARTNERSHIP	PA 10/06/1992				8680020008	ALLENTOWN PMSA
9218091	MEEKER, HERBERT S.	PA 06/09/1992				8155065003	ALLENTOWN-BETHLHM PA
9200736	BACHOW, PAUL S.	PA 05/12/1992				8155968005	HARRISBURG PA
9211551	FOUR M MLDs GROUP	PA 05/11/1992				8155963015	HARRISBURG PA
9215502	M3 ILLINOIS TELECOM CORP	PA 01/13/1992				8155177009	HARRISBURG PA
9218053	ORANGE WIRELESS PARTNERS	PA 05/12/1992				8155962008	HARRISBURG PA
9218151	CONE, S.E., JR.	PA 05/11/1992				8155964001	HARRISBURG PA
9216677	RONALD E. SANSAC	PA 04/06/1992				8155816006	HARRISBURG MSA
9318628	BSV PARTNERSHIP	PA 10/06/1992				8680020006	HARRISBURG PMSA
9218035	MAH INC	PA 05/04/1992				8155939008	HARRISBURG/LEBANON PA
9318504	MATHES, PHILIP H.	PA 10/02/1992				8680009007	LANCASTER PA
9318517	LIKINS, PAUL	PA 10/21/1992				8680064002	LANCASTER PA
9111270	LDH INTERNATIONAL INC	MA 02/08/1991				8155674008	PHILADELPHIA PA
9112780	HOPPRO INVESTMENT GROUP	PA 07/15/1991				8155265009	PHILADELPHIA PA
9318309	JOS. D. CARNEY & ASSOC.	PA 10/02/1992				8680004005	PHILADELPHIA MSA
9200742	BACHOW, PAUL S.	PA 05/14/1992				8155983004	PITTSBURGH PA
9118120	ARATUNIAN, MICHAEL	PA 08/19/1991				8155435002	PITTSBURGH PA
9218066	ORANGE WIRELESS PARTNERS	PA 05/18/1992				8155996012	PITTSBURGH PA
9210597	ACOR, EVERETT T	PA 12/09/1991				8155940013	PITTSBURGH PA
9211618	ILOHCA CORP.	PA 05/14/1992				8155982008	PITTSBURGH PA
9211677	LINDEMANN, FRAYDA B.	PA 05/14/1992				8155984004	PITTSBURGH PA
9211686	FOUR M MLDs GROUP	PA 05/18/1992				8155996006	PITTSBURGH PA
9218123	ASSOCIATED MDS CORPO	PA 05/15/1992				8155990005	PITTSBURGH PA
9218131	BRENNAN, JOHN E.	PA 05/14/1992				8155985002	PITTSBURGH PA
9218137	CONE, S.E., JR.	PA 05/18/1992				8155997002	PITTSBURGH PA
9318000	ASSOCIATED MDS CORP	PA 10/23/1992					PITTSBURGH PA
9318296	JOS. D. CARNEY & ASSC.	PA 10/02/1992				8680002009	PITTSBURGH MSA
9215618	R&R TELECOMMUNICATION	PA 01/24/1992				8155255011	PITTSBURGH PMSA
9215618	R&R TELECOMMUNICATION	PA 01/24/1992				8155255011	PITTSBURGH PMSA
9215889	VIDEO COMMUNICATIONS	PA 02/26/1992				8155482005	PITTSBURGH PMSA
9318626	CELULARVISION	PA 10/06/1992				8680020004	PITTSBURGH PMSA
9318627	BSV PARTNERSHIP	PA 10/06/1992				8680020005	RANSOM PMSA
9218205	METTLER COMMUNICATIONS	PA 08/07/1992				8155232005	READING PA
9318506	MISSIRIAN, RAPHAEL A.	PA 10/02/1992				8680011004	READING PA
9200541	AMBY, FAITH C.	PA 04/06/1992				8155808010	SCRANTON PA
9211357	RUSSELL HEDDEN	PA 04/06/1992				8155816007	SCRANTON PA
9215466	WIRELESS CABLE LTD	CA 12/23/1991				8155998001	SCRANTON PA
9216587	PATRICIA B. MAILANI	PA 03/06/1992				8155564012	SCRANTON MSA
9218173	SNELLING, CHARLES D.	PA 07/07/1992				8155142001	SCRANTON-WILKES BARR PA
9200728	BACHOW, PAUL S.	PA 05/12/1992				8155969003	YORK PA
9211547	FOUR M MLDs GROUP	PA 05/11/1992				8155963019	YORK PA
9216582	SENVISTA GENERAL	PA 03/13/1992				8155604001	YORK PA
9218051	ORANGE WIRELESS PARTNERS	PA 05/12/1992				8155962006	YORK PA
9218150	CONE, S.E., JR.	PA 10/02/1992				8155964003	YORK PA
9318505	TOMPKINS, W. WOODRUFF	PA 10/02/1992				8680011003	YORK PA
9218117	FREEDOM TECHNOLOGIES	PR 07/06/1992				8155143001	SAN JUAN PR
9318510	SMC ASSOCIATES	PR 10/09/1992				8680036002	SAN JUAN PR
9218263	CT COMMUNICATIONS CORP	RI 09/29/1992				8155404005	PANTUCKET-WOONSOCKET RI
9118121	ALLIANCE ASSOCIATES	RI 08/16/1991				8155430010	PROVIDENCE RI
9200743	BACHOW, PAUL S.	RI 05/14/1992				8155983002	PROVIDENCE RI
9211312	HORNBY, HAROLD	RI 04/07/1992				8155810004	PROVIDENCE RI
9211689	FOUR M MLDs GROUP	RI 05/18/1992				8155996003	PROVIDENCE RI

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9215436	WIRELESS CABLE LTD	P	KY 12/09/1991				PROVIDENCE	RI
9216601	P.M.J. SECURITIES INC	P	RI 03/16/1992	02/05/1992		8155705005	PROVIDENCE	RI
9216621	TELECOM/HADDOCK INVESTOR	P	RI 03/24/1992	08/05/1992		8155703013	PROVIDENCE	RI
9216640	TELECOM INVESTMENT CORP	P	RI 03/16/1992	08/05/1992		8155704002	PROVIDENCE	RI
9218076	ORANGE WIRELESS PARTNERS	P	RI 05/18/1992			8155997001	PROVIDENCE	RI
9218130	CONE, S.E., JR	P	RI 05/18/1992			8155997003	PROVIDENCE	RI
9215619	R&R TELECOMMUNICATION	P	RI 01/24/1992	03/18/1992		8155255014	PROVIDENCE	RI
9215619	R&R TELECOMMUNICATION	P	RI 01/24/1992	03/18/1992		8155255014	PROVIDENCE	RI
9215999	SUBSCRIBER TV PARTNERS	P	SC 02/24/1992	06/10/1992		8155464001	AUGUSTA MSA	SC
9211420	KINGSHOOD ASSOCIATES	P	SC 04/14/1992	06/24/1992		8155880004	CHARLESTON	SC
9211942	FORESIGHT COMMUNICATIONS	P	SC 07/20/1992			8155172008	CHARLESTON	SC
9216645	SCNY COMMUNICATIONS	P	SC 03/16/1992			8155703018	CHARLESTON	SC
9218231	SUITE 12 GROUP	P	SC 08/24/1992			8155284002	CHARLESTON	SC
9215936	ROBERT ROSENKRANZ	P	SC 02/13/1992	05/20/1992		8155405005	CHARLESTON MSA	SC
9216643	SCNY COMMUNICATIONS	P	SC 03/16/1992			8155703020	COLUMBIA	SC
9218096	ROBERTSON, JEANNE P.	P	SC 06/12/1992			8155075005	COLUMBIA	SC
9218189	BSV PARTNERSHIP	P	SC 08/10/1992			8155237007	COLUMBIA	SC
9216019	SUBSCRIBER TV PARTNERS	P	SC 02/20/1992	06/10/1992		8155456007	COLUMBIA MSA	SC
9318622	CELULARVISION	P	SC 10/16/1992			8680052001	COLUMBIA PMSA	SC
9210967	EDELSON, HARRY	P	SC 01/24/1992	03/25/1992		8155254007	GREENVILLE	SC
9211718	KRZETOWSKI, ANDREW J.	P	SC 05/26/1992	05/13/1992		8155019005	GREENVILLE	SC
9215891	SENVISTA GENERAL	P	SC 02/26/1992			8155481006	GREENVILLE	SC
9216646	SCNY COMMUNICATIONS	P	SC 03/16/1992			8155703017	GREENVILLE	SC
9218104	MITCHELL, DAVID JAN	P	SC 06/16/1992			8155082004	GREENVILLE	SC
9318618	CELULARVISION	P	SC 10/16/1992			8680052004	GREENVILLE PMSA	SC
9318508	BUTLER, LAWRENCE	P	TN 10/15/1992			8680048008	BUFFALO MOUNTAIN	TN
9218195	KINGSHOOD ASSOCIATES	P	TN 08/05/1992			8155224001	CHATTANOOGA	TN
9318515	BUTLER, MICHAEL	P	TN 10/15/1992			8680048007	CHATTANOOGA	TN
9318610	CELULARVISION	P	TN 10/02/1992			8680009002	CHATTANOOGA PMSA	TN
9318607	CELULARVISION	P	TN 10/02/1992			8680009006	KINGSPORT PMSA	TN
9200729	BACHOW, PAUL S.	P	TN 05/12/1992			8155969002	KNOXVILLE	TN
9211076	GHZ BROADCASTING INC	P	TN 02/24/1992	05/06/1992		8155456016	KNOXVILLE	TN
9211549	FOUR M MLDS GROUP	P	TN 05/11/1992			8155963017	KNOXVILLE	TN
9218055	ORANGE WIRELESS PARTNERS	P	TN 05/12/1992			8155962010	KNOXVILLE	TN
9218099	ROBERTSON, JEANNE P.	P	TN 06/12/1992			8155075002	KNOXVILLE	TN
9218121	PEYSER, FREDERICK M.	P	TN 07/06/1992			8155141001	KNOXVILLE	TN
9218152	CONE, S.E., JR.	P	TN 05/11/1992			8155088005	KNOXVILLE	TN
9218165	ALDA MULTICHANNELS, LTD	P	TN 06/17/1992			8155379004	KNOXVILLE	TN
9218245	RICHARD CARL LEVY PART	P	TN 09/22/1992			8680009004	KNOXVILLE PMSA	TN
9318608	CELULARVISION	P	TN 10/02/1992			8155971002	MEMPHIS	TN
9200721	BACHOW, PAUL S.	P	TN 05/12/1992			8155772004	MEMPHIS	TN
9210267	BROWN, DAVID	P	TN 11/01/1991	11/27/1991	TE	8155066008	MEMPHIS	TN
9210732	CORNBLATT, ARNOLD	P	TN 01/03/1992	02/12/1992	TE	8155963006	MEMPHIS	TN
9211600	FOUR M MLDS GROUP	P	TN 05/11/1992			8155091003	MEMPHIS	TN
9211829	HIGH BAND BROADCASTING	P	TN 06/18/1992			8155962012	MEMPHIS	TN
9218075	ORANGE WIRELESS PARTNERS	P	TN 05/11/1992			8155964009	MEMPHIS	TN
9218144	CONE, S.E., JR.	P	TN 05/11/1992			8155234005	MEMPHIS	TN
9218200	VICK, MAURICE M. & CHARL	P	TN 08/07/1992			81555405002	MEMPHIS MSA	TN
9215832	ROBERT ROSENKRANZ	P	TN 02/13/1992	04/29/1992		8155564002	NASHVILLE	TN
9200367	AMBY, FAITH C.	P	TN 03/06/1992			8155808003	NASHVILLE	TN
9200527	ASSOCIATED MDS CORP	P	TN 04/06/1992			8155817005	NASHVILLE	TN
9200551	BACHOW, PAUL S.	P	TN 04/06/1992			8155811004	NASHVILLE	TN
9200585	CONE, S.E., JR.	P	TN 04/06/1992			8155919007	NASHVILLE	TN
9210576	ELECTRONIC RETAILING SYS	P	TN 12/05/1991	01/15/1992	TE	8155810001	NASHVILLE	TN
9211310	LEVIN, MICHAEL H.	P	TN 04/07/1992	06/03/1992	T			TN
9215413	R&R TELECOMMUNICATION	P	TN 12/30/1991	02/05/1992	TE		NASHVILLE	TN

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9215445	NEW SOUTH ASSOCIATES	FL 12/05/1991		02/05/1992	TE		NASHVILLE	TN
9218004	ORANGE WIRELESS PARTNERS	TN 04/07/1992			T	8155811007	NASHVILLE	TN
9218082	SUITE 12 GROUP	TN 06/08/1992			T	8155055004	NASHVILLE	TN
9211074	KING BROADCASTING ASSOC	TX 02/24/1992		05/06/1992	T	8155456003	ABILENE	TX
9218248	RICHARD CARL LEVY PART	TX 09/22/1992			T	8155379005	ABILENE	TX
9211943	KING BROADCASTING ASSOC	TX 07/20/1992			T	8155173003	AMARILLO	TX
9318501	MEGERDICHIAN, JACK	TX 10/02/1992			T	8680009005	AMARILLO	TX
9200455	BMB PARTNERSHIP	TX 04/13/1992		07/08/1992	T	8155878006	AUSTIN	TX
9200469	ASSOCIATED MDS CORP	TX 04/14/1992		07/15/1992	T	8155886005	AUSTIN	TX
9200598	BACHOW, PAUL S.	TX 04/14/1992			T	8155888006	AUSTIN	TX
9210730	LONGERAN, WILLIAM R.	TX 01/02/1992		02/12/1992	TE	8155101001	AUSTIN	TX
9210731	JORGENSEN, DAVID G.	TX 01/03/1992		02/12/1992	TE	8155068008	AUSTIN	TX
9211419	KINGSMOOD ASSOCIATES	TX 04/14/1992		06/24/1992	T	8155880005	AUSTIN	TX
9211423	MARK B. FISHER	TX 04/14/1992		06/24/1992	T	8155878003	AUSTIN	TX
9211427	FOUR M MLDs GROUP	TX 04/13/1992			T	8155882007	AUSTIN	TX
9216656	ORANGE WIRELESS	TX 04/13/1992			T	8155881007	AUSTIN	TX
9216666	M.M. & C.O. VICK PARTNER	TX 04/14/1992			T	8155887003	AUSTIN	TX
9318285	ASSOC. MDS CORP.	TX 10/02/1992			T	8155886004	AUSTIN	TX
9218193	KINGSMOOD ASSOCIATES	TX 08/05/1992			T	8155224003	BEAUMONT	TX
9318603	WILLIAM H. WILLIAMS	TX 10/02/1992			T	8680009010	BEAUMONT	TX
9216654	UNIVERSITY OF TEXAS	TX 04/10/1992			T	8155868003	BROWNSVILLE	TX
9215180	RIOVISION OF TEXAS	TX 11/15/1991		12/26/1991	S		BROWNSVILLE	TX
9318604	WILLIAM H. WILLIAMS	TX 10/02/1992			T	8680009009	CORPUS CHRISTI	TX
9117537	PETER RINFRET	TX 07/15/1991		09/25/1991	S		DALLAS	TX
9318509	METROCOM TELECASTING	TX 10/01/1992			T	8680006001	DALLAS	TX
9110799	LDH INTERNATIONAL INC	TX 12/24/1990		05/15/1991	TE	8155586002	DALLAS-FORT WORTH	TX
9200600	BACHOW, PAUL S.	TX 04/14/1992			T	8155037003	EL PASO	TX
9210706	BUCHWALD, JOSEPH B.	TX 12/30/1991		02/12/1992	TE	8155877005	EL PASO	TX
9211422	TOM ELLIOTT	TX 04/14/1992		06/24/1992	T	8155882003	EL PASO	TX
9211431	FOUR M MLDs GROUP	TX 04/13/1992			T	8155757001	EL PASO	TX
9216593	SENVISTA GENERAL	TX 03/06/1992		08/05/1992	T	8155881005	EL PASO	TX
9216658	ORANGE WIRELESS	TX 04/13/1992		08/05/1992	T	8155254003	EL PASO	TX
9215623	ROBERT E. LA BLANC	TX 01/24/1992		03/18/1992	T	8155254003	EL PASO	TX
9215623	ROBERT E. LA BLANC	TX 01/24/1992		03/18/1992	T	8155441010	EL PASO	TX
9215943	WESTERN SIERRA	TX 02/18/1992		05/20/1992	T	8155811014	FT WORTH	TX
9200525	ASSOCIATED MDS CORP	TX 04/06/1992			T	8155818004	FT WORTH	TX
9200545	BRENNAN, JOHN E.	TX 04/06/1992			T	8155817002	FT WORTH	TX
9200554	BACHOW, PAUL S.	TX 04/06/1992			T	8155811002	FT WORTH	TX
9200587	CONE, S.E., JR	TX 04/06/1992		06/17/1992	T	8155818001	FT WORTH	TX
9211349	LINDEMANN, FRAYDA B.	TX 04/08/1992		02/05/1992	TE	8155811012	FT WORTH	TX
9215458	JAMES L. MELCHER	TX 12/26/1991			T	8155369009	FT. WORTH	TX
9218009	ORANGE WIRELESS PARTNERS	TX 04/07/1992		04/29/1992	T	8155441012	GALVESTON	TX
9211090	KELLY, PAUL N.	TX 02/10/1992		12/11/1991	TE	8155674011	HOUSTON	TX
9215150	ROY TARTAGLIA	TX 11/04/1991		05/20/1992	T	8155264006	HOUSTON	TX
9111273	LDH INTERNATIONAL INC	TX 02/08/1992		05/15/1991	TE	8155088009	HOUSTON	TX
9112777	KAVID KOFFMAN	TX 07/15/1991		10/02/1991	TE	8155901008	LAREDO	TX
9218161	ALDA MULTICHANNELS, LTD	TX 04/21/1992		06/24/1992	T	8155284004	LAREDO	TX
9211452	FORESIGHT COMMUNICATIONS	TX 06/17/1992			T	8155880007	LUBBOCK	TX
9218094	SUMMIT ADVISORY, LTD THE	TX 06/15/1992			T	8155403001	MCAL. EDIN. MISSN.	TX
9218227	MONTGOMERY, ROBERT L	TX 08/24/1992			T	8155869002	MCALLEN	TX
9200462	CACTUS TELEVISION INTER	TX 04/13/1992			T	8155173002	MIDLAND	TX
9318277	CT COMM. CORP.	TX 10/02/1992			T			
9215179	RIOVISION OF TEXAS	TX 11/15/1991		12/26/1991	S			
9216655	UNIVERSITY OF TEXAS	TX 04/10/1992			T			
9211944	KING BROADCASTING ASSOC	TX 07/20/1992			T			

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9218181	KING BROADCASTING ASSOC. P	TX 06/20/1992		T		8155172002	ODESSA MSA	TX
9218202	KING BROADCASTING ASSOC P	TX 08/10/1992		T		8155236010	SAN ANGELO	TX
9200720	BACHOW, PAUL S. P	TX 05/12/1992		T		8155971003	SAN ANTONIO	TX
9210278	LEVINE, D. CHRISTOPHER P	TX 11/04/1991		TE		8155778006	SAN ANTONIO	TX
9211130	HORNBY, HAROLD P	TX 03/09/1992		T		8155564009	SAN ANTONIO	TX
9211602	FOUR M MLDs GROUP P	TX 05/11/1992		T		8155963004	SAN ANTONIO	TX
9215433	WIRELESS CABLE LTD P	KY 12/09/1991		S		8155962002	SAN ANTONIO	TX
9218045	ORANGE WIRELESS PARTNERS P	TX 05/12/1992		T		8155082012	SAN ANTONIO	TX
9218108	PMB PARTNERSHIP P	TX 06/16/1992		T		8155964005	SAN ANTONIO	TX
9218148	CONE, S.E., JR. P	TX 05/11/1992		T		8155964005	SAN ANTONIO	TX
9200212	CAMBRIDGE MANAGEMENT P	TX 01/24/1992		T		2155254010	SAN ANTONIO, TX MSA	TX
9211451	FORESIGHT COMMUNICATIONS P	TX 04/21/1992		T		8155901009	TYLER	TX
9218190	CHOREKCHYAN, GAYK P	TX 08/24/1992		T		8155284007	TYLER	TX
9218197	METTLER COMMUNICATIONS P	TX 08/05/1992		T		8155224006	WACO	TX
9318605	WILLIAM H. WILLIAMS P	TX 10/02/1992		T		8680009008	WACO PMSA	TX
9218210	SMITH, WILLIAM L. P	UT 08/10/1992		T		8155241001	PROVO	UT
9200593	BSV PARTNERSHIP P	UT 04/17/1992		T		8155896002	SALT LAKE CITY	UT
9210915	CLARK, THOMAS FRANCIS P	UT 01/23/1992		T		8155233003	SALT LAKE CITY	UT
9211460	HORNBY, HENRI R P	UT 04/20/1992		T		8155901014	SALT LAKE CITY	UT
9215812	SMITH, KATHLEEN P	UT 02/10/1992		T		8155370004	SALT LAKE CITY	UT
9216592	SENVISTA GENERAL P	UT 03/06/1992		T		8155757004	SALT LAKE CITY	UT
9218160	KRZETOWSKI, ANDREW P	UT 06/17/1992		T		8155088010	SALT LAKE CITY	UT
9218012	WILLIAM L. SMITH P	UT 04/20/1992		T		8155901013	SALT LAKE CITY	UT
9210972	EDELSON, HARRY P	VA 01/27/1992		T		8155255009	NORFOLK	VA
9215151	WILLIAM P. TAVOLAREAS P	VA 11/04/1991		TE			NORFOLK	VA
9215368	SHENANDOAH GROUP P	NC 12/05/1991		S		8155564011	NORFOLK MSA	VA
9216588	PATRICIA B. MAILANI P	VA 03/06/1992		T		8680004004	NORFOLK MSA	VA
9318308	JOS. D. CARNEY & ASSOC. P	VA 10/02/1992		T		8155878007	RICHMOND	VA
9200456	BMB PARTNERSHIP P	VA 04/13/1992		T		8155882009	RICHMOND	VA
9200467	CONE, S.E., JR P	VA 04/13/1992		T		8155888005	RICHMOND	VA
9200599	BACHOW, PAUL S. P	VA 04/14/1992		T		8155886003	RICHMOND	VA
9200649	ASSOCIATED MDS CORP P	VA 04/14/1992		T		8155980005	RICHMOND	VA
9210698	BAY BROADCASTING ASSOC P	VA 12/24/1991		TE		8155123007	RICHMOND	VA
9210736	CLARK, THOMAS FRANCIS P	VA 01/06/1992		TE		8155882006	RICHMOND	VA
9211428	FOUR M MLDs GROUP P	VA 04/13/1992		T		8155705014	RICHMOND	VA
9216596	P.M.J. SECURITIES INC P	VA 03/16/1992		C		8155703001	RICHMOND	VA
9216618	TELECOM/HADDOCK INVESTOR P	VA 03/24/1992		T		8155877006	RICHMOND	VA
9216625	TELECOM INVESTMENT CORP P	VA 03/16/1992		T		8155881006	RICHMOND	VA
9216653	WILLIAM MCKISSOUCK P	VA 04/13/1992		T		8155887005	RICHMOND	VA
9216657	ORANGE WIRELESS P	VA 04/13/1992		T		8680011010	ROANOKE PMSA	VA
9216663	M.M. & C.O. VICK PARTNER P	VA 04/14/1992		T		8155398001	BREMERTON	VA
9318606	CELLULARVISION P	VA 10/02/1992		T		8155901006	OLYMPIA	WA
9218249	CT COMMUNICATIONS CORP P	WA 09/29/1992		T		8155284003	OLYMPIA	WA
9211454	FORESIGHT COMMUNICATIONS P	WA 04/20/1992		T		8155404006	OLYMPIA	WA
9218226	MCKISSOCK, WILLIAM J. P	WA 08/24/1992		T		8155709005	SEATTLE-EVERETT	WA
9218264	CT COMMUNICATIONS CORP P	WA 09/29/1992		TE		8155264001	SEATTLE-TACOMA	WA
9111303	LDH COMMUNICATIONS INC P	WA 02/20/1991		T		8155082014	SPOKANE	WA
9112781	HOVNANIAN, ARA K P	WA 07/15/1991		T		8155564004	SPOKANE	WA
9200665	BSV PARTNERSHIP P	WA 06/16/1992		T		8155816005	SPOKANE	WA
9211133	HORNBY, HAROLD P	WA 03/06/1992		T		8680075014	SPOKANE	WA
9211356	SARKIS, KRICKIAN P	WA 04/06/1992		T		8155877007	TACOMA	WA
9215446	NEW SOUTH ASSOCIATES P	FL 12/05/1991		TE		8155032003	TACOMA	WA
9318519	SKYLINE ENTRTNMNT NTHWK P	WA 10/23/1992		T		8155087002	TACOMA	WA
9200457	BMB PARTNERSHIP P	WA 04/13/1992		T				
9210710	JORGENSEN, DAVID G. P	WA 12/26/1992		TE				
9211823	HASCOE, NORMAN P	WA 06/17/1992		T				

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FILE NUMBER	APPLICANT	FILE DATE	ACTION DATE	PN DATE	CALL SIGN	FEE NUMBER	SERVICE AREA	
9218225	TOMPKINS, W. WOODRUFF	WA 08/24/1992				8155284005	TACOMA	WA
9218183	TITLE TOWN TV	WI 07/20/1992				8155172007	GREEN BAY	WI
9218115	SILBERMAN, MARK	WI 06/30/1992				8155121005	MADISON	WI
9218258	CT COMMUNICATIONS CORP	WI 09/29/1992				8155398009	MADISON	WI
9216578	MADISON WIRELESS	WI 03/16/1992				8155609004	MADISON MSA	WI
9318268	PAUL LIKINS	WI 10/02/1992		08/05/1992	S	868001004	MADISON, WI MSA	WI
9200604	BACHOW, PAUL S.	WI 04/30/1992				8155934002	MILWAUKEE	WI
9200670	BSV PARTNERSHIP	WI 05/04/1992				8155943002	MILWAUKEE	WI
9210961	FEINBERG, JUDY	WI 01/13/1992				8155178004	MILWAUKEE	WI
9211526	FOUR M MLDS GROUP	WI 05/04/1992				8155944002	MILWAUKEE	WI
9211530	ILOHCA CORP	WI 05/04/1992				8155943003	MILWAUKEE	WI
9215152	CLAY MARSTON	WI 11/01/1991		12/11/1991	TE		MILWAUKEE	WI
9218039	ORANGE WIRELESS PARTNERS	WI 05/05/1992				8155944004	MILWAUKEE	WI
9218122	CONE, S.E., JR.	WI 05/04/1992				8155944003	MILWAUKEE	WI
9218162	ALDA MULTICHANNELS, LTD	WI 06/17/1992				8155088008	MILWAUKEE	WI
9215937	ROBERT ROSENKRANZ	WI 02/13/1992				8155405006	MILWAUKEE PMSA	WI
9218198	VIRGINIA COMMUNICATIONS	WV 08/05/1992		05/20/1992	T	8155224004	HUNTINGTON	WV
9218211	HUGHES, LEONARD	WY 08/10/1992				8155236004	CASPER	WY
9218214	HUGHES, LEONARD	WY 08/10/1992				8155236006	CHEYENNE	WY